Agriculture Canada

Research Branch | Direction générale de la recherche

Soils of the Red Indian Lake – Burgeo Area Newfoundland

Report No. 9 Newfoundland Soil Survey 1988

Canada

92-00454/

Soils of the Red Indian Lake – Burgeo Area Newfoundland

Report No. 9,
Newfoundland Soil Survey

E.F. Woodrow
Land Resource Research Centre
St. John's, Newfoundland

Land Resource Research Centre
Contribution No. 84-15

Research Branch
Agriculture Canada
1988

Copies of this publication are available from
Mr. E. Woodrow
Canada Soil Survey
Research Branch, Agriculture Canada
Research Station, P.O. Box 7098
St. John's West, Nfld.
A1E 3Y3

Produced by Research Program Service

©Minister of Supply and Services Canada 1987
Cat. No.:A57-116/9E
ISBN: 0-662-15340-5

CONTENTS

	Page
ABSTRACT	v
ACKNOWLEDGEMENTS	v
INTRODUCTION	1
GENERAL DESCRIPTION OF THE AREA	1
Location and extent	1
Topography and drainage	1
Climate	4
Vegetation	4
Settlement and land use	8
Survey procedure	8
Main soil characteristics and soil classification	10
DESCRIPTIONS OF THE SOIL ASSOCIATIONS	11
Atlantic Lake	11
Berry Hill Pond	13
Birchy Ridge	15
Cox's Cove	17
Deadwolf Pond	19
Ebbegunbaeg	21
Gander	22
Lomond	24
Mint Pond	26
New Bay	28
North Lake	30
Pitt's Pond	32
Pot Hill	34
Rainy Lake	35
Red Indian	36
Salmon River	38
Silver Mountain	39
St. George's	41
The Topsails	43
Trout River	45
REFERENCES	46
APPENDIX	
Explanation of extended legend	48
Extended legend	49
Soil analytical data	65

Figures

		Page
1.	Location of proposed agricultural development areas.	2
2.	Map of Newfoundland showing an outline of Red Indian Lake-Burgeo mapsheet and the major roads.	3
3.	Air temperatures (Hare 1952).	5
4.	Duration of vegetative season (in days) (Hare 1952).	6
5.	Mean Annual Precipitation (mm).	7
6.	Map of Newfoundland showing the Boreal forest regions according to Rowe, 1959.	9
7.	Fiord along the South Coast.	10
8.	Sketch of a landform with soils of the Atlantic Lake association..	12
9.	Sketch of a landform with soils of the Berry Hill Pond association.	13
10.	Sketch of landforms with soils of the Birchy Ridge association. ..	16
11.	Sketch of landforms with soils of the Cox's Cove association.	18
12.	Sketch of a landform with soils of the Deadwolf Pond association..	20
13.	Sketch of a landform with soils of the Ebbegunbaeg association. ..	21
14.	Sketch of landforms with soils of the Gander association.	23
15.	Sketch of a landform with soils of the Lomond association.	25
16.	Sketch of a landform with soils of the Mint Pond association.	27
17.	Sketch of landforms with soils of the New Bay association.	29
18.	Sketch of landforms with soils of the North Lake association.	31
19.	Sketch of landforms with soils of the Pitt's Pond association. ...	33
20.	Sketch of landforms with soils of the Pot Hill association.	34
21.	Sketch of landform with soils of the Rainy Lake association.	35
22.	Sketch of landforms with soils of the Red Indian Association.	37
23.	Sketch of a landforms with soils of the Salmon River association..	38
24.	Sketch of landforms with soils of the Silver Mountain association.	40
25.	Sketch of landforms with soils of the St. George's Association. ..	42
26.	Sketch of landforms with soils of the Topsails Association.	44
27.	Sketch of a landform with soils of the Trout River Association. ..	45

SOILS OF THE RED INDIAN LAKE-BUREGO AREA

ABSTRACT

The Red Indian Lake-Burgeo exploratory soil survey began in 1979. Its purpose was to evaluate, at a scale of 1:250 000, the soils and their agricultural potential for the area. The report gives a general description of the area as well as a description of some of the soil associations that occur. Analytical data and sectional diagrams of same of the soils are also presented. A soil map at a scale of 1:250 000 accompanies the report.

ACKNOWLEDGEMENTS

H. W. R. Chancey, director of the Research Station, Agriculture Canada, St. John's West and the Newfoundland Department of Rural Agricultural and Northern Development provided facilities during the project. P. K. Heringa provided guidance, valuable criticism, soil correlation and advised on many aspects of the work. J. H. Day and D.J. Kroetsch edited the report and along with J. L Nowland and G.J. Beke provided guidance in soil correlation. M. Bowen and J. Petten assisted with the fieldwork. D. Power assisted with figure preparation.

Bern Fardy and Andrew Webber, Cartography Section, Soil and Land Management Division, Newfoundland Department of Rural Agricultural and Northern Development supplied some of the small scale maps. Dale Sudom, Claude Shryburt and Ken Guthrie sampled some of the dominant soils.

The maps were prepared by the Cartographic unit of the Land Resource Research Institute, Ottawa. The soils were analysed by the Analytical Service Laboratory, of the Land Resource Research Institute, Ottawa, or by the Canadian Forestry Service, St. John's.

INTRODUCTION

The exploratory soil survey program of Newfoundland began in the spring of 1974. The purpose of the program was to evaluate, at a scale of 1:250 000, the province's soils and their agricultural potential. The Red Indian Lake-Burgeo mapsheet was initiated in the spring of 1979 and field work was completed during the summer of 1980.

Prior to 1974, reconnaissance soil surveys were carried out in areas where agriculture had already been established. After the start of the exploratory program areas of agricultural potential were located and proposed agricultural development areas were established (Fig. 1). More detailed soil surveys are presently being carried out in these areas by the Newfoundland soil survey unit at the Department of Rural Agricultural and Northern Development and Agriculture Canada.

The report gives a general description of the area including its location, extent, topography, and drainage, the survey procedures used, climate and vegetation typical for the area, areas settled, land use and a brief description of some of the main soil characteristics.

The main part of the report describes the soil associations and presents representative soil profile descriptions and analytical data. Sectional diagrams explain the distribution of soils within the association.

This exploratory soil survey made possible the production of a Canada Land Inventory Land Capability for Agriculture map at a scale of 1:250 000. The map is available from Environment Canada distribution facilities.

GENERAL DESCRIPTION OF THE AREA

Location and extent

The Red Indian Lake-Burgeo area is portrayed on National Topographic mapsheets (1:250 000 scale) 12A and 11P. It lies between latitude 47°00' and 49°00' and longitude 56°00' and 58°00'N. The surveyed area covers approximately 22 453 km^2 and extends from Badger on the east to Corner Brook on the west and southward to the Atlantic Ocean (Fig. 2).

Topography and drainage

The Red Indian Lake-Burgeo area is bounded on the west and northwest by the Long Range Mountains, where elevations exceed 600 m. An area of undulating barren, known as the Topsails, is located to the north of Buchans. Along the east side of the area the topography is gently rolling or hummocky with peaks of 350 m scattered throughout. The southern part of the area is bounded by the Atlantic Ocean where steep exposed cliffs, long steep-sided fiords, and generally a rugged coastline, provide evidence of glacial ice movement towards the ocean.

0 15 30 45 60
Kilometres
HUMBER VALLEY REGION (MAP 3)
GREEN BAY REGION (MAPS 7,8,9)
LEWISPORTE REGION (MAPS 14,15)
WOODDALE REGION (MAP 2)
GANDER LAKE REGION (MAP 16)
PORT AU PORT REGION (MAP 10)
TERRA NOVA REGION (MAP 17)
MUSGRAVETOWN REGION (MAP 6)
ROBINSON'S REGION (MAP 4)
BAY D'ESPOIR REGION (MAP 19)
CODROY REGION (MAP 5)
MARKLAND REGION (MAP 13)
ST JOHN'S REGION (MAP 1)
BURIN REGION (MAP 11,12)
AVALON SOUTH REGION (MAP 18)

Fig. 1. Location of proposed Agricultural Development Areas.

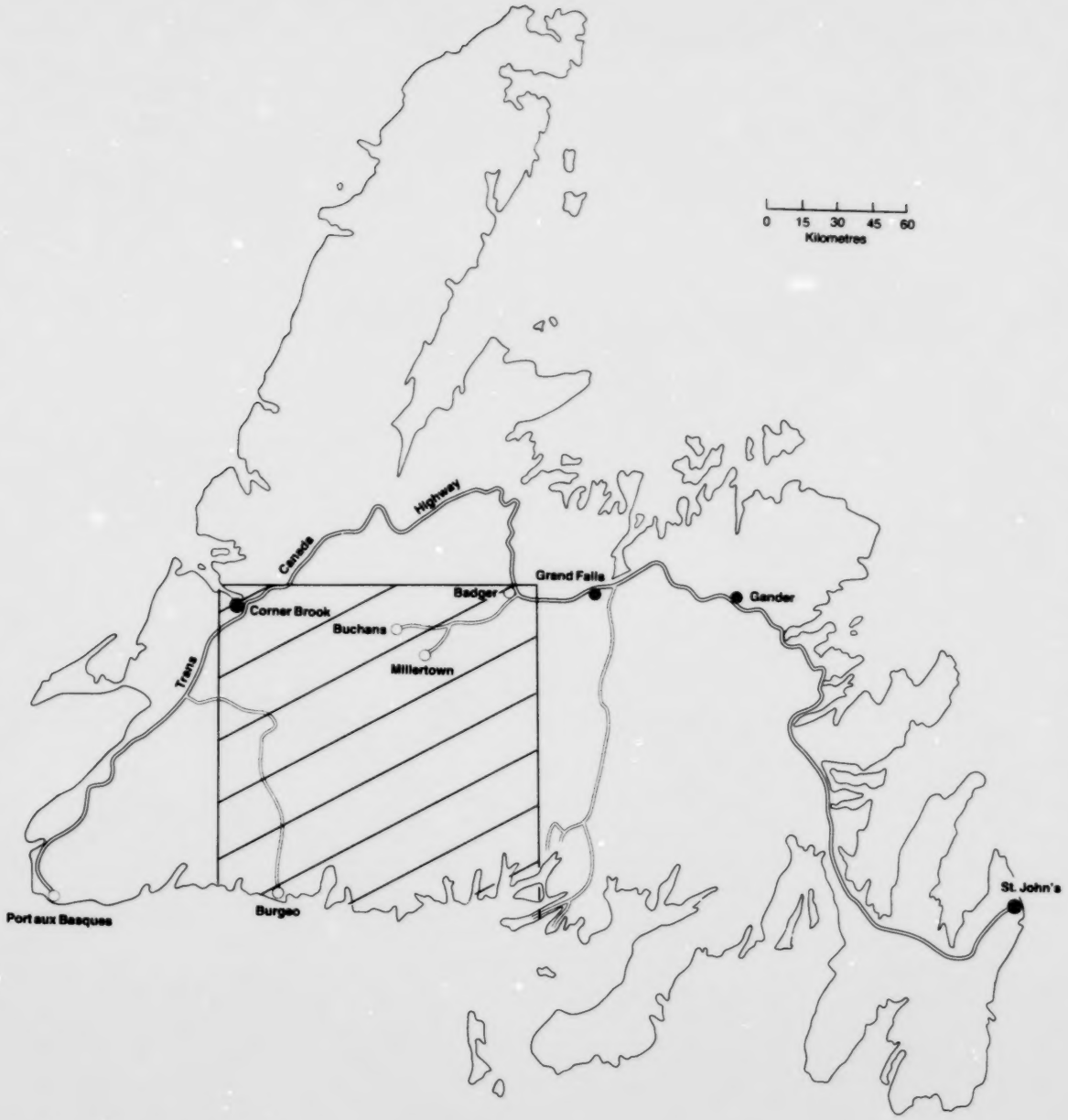


Fig. 2. Map of Newfoundland showing an outline of Red Indian Lake-Burgeo mapsheet and the major roads.

Two of Newfoundland's larger lakes occur in the area. Grand Lake is located on the northwest side and Red Indian Lake occurs in the north central part. Meelpaeg Lake reservoir, located in the southeastern part of the mapsheet, was created by a series of dams and the joining of several smaller lakes. It forms the major source of water for the power development at Bay d'Espoir located about 50 km to the southeast.

The Exploits River, Newfoundland's largest, flows from Red Indian Lake to the northeast past Badger. Numerous smaller rivers, streams and lakes are scattered throughout the entire mapsheet.

Climate

Newfoundland's climate is generally cool in summer and mild in winter, due to the oceanic influence. The cold Labrador current keeps air cool during most of the summer, but by autumn the water has warmed and exerts a warming effect on air temperatures during the fall or early part of the winter. Cool summer temperatures, short growing seasons and high precipitation are typical for the entire island.

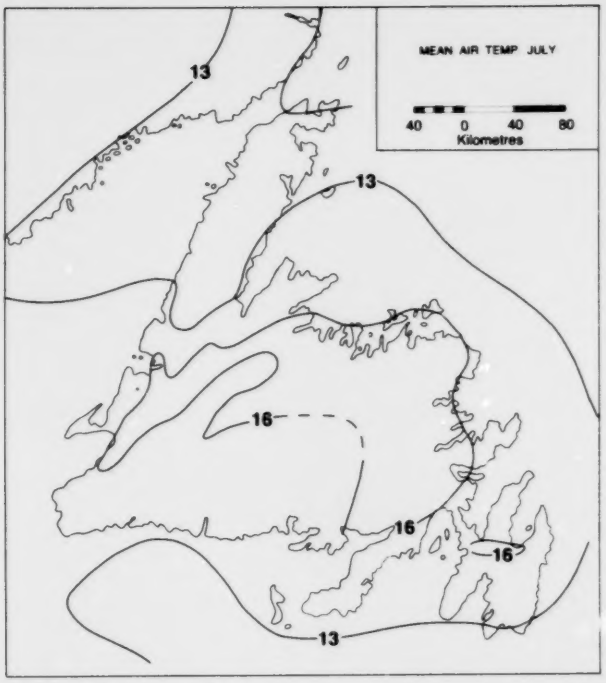
Some minor differences do occur between central and coastal Newfoundland. Since the Red Indian Lake-Burgeo area is located primarily in the central part of the island (Fig. 2) it is less influenced by the ocean than the coastal areas. Summer temperatures tend to be warmer (mean air temperature for July is 16°C) and winter temperatures are colder (mean air temperature for January is -10°C) compared to coastal areas which have mean air temperatures for July 13°C and January -4°C (Fig. 3). However, the number of warmer days is less than in the coastal areas. Figure 4 shows the central area of the island as having a vegetative season of 150 days compared to 160 in most coastal areas. Mean annual precipitation is greater in the surveyed area which receives 1270-1400 mm compared to some coastal areas which receive an average of 760 mm (Fig. 5).

Vegetation

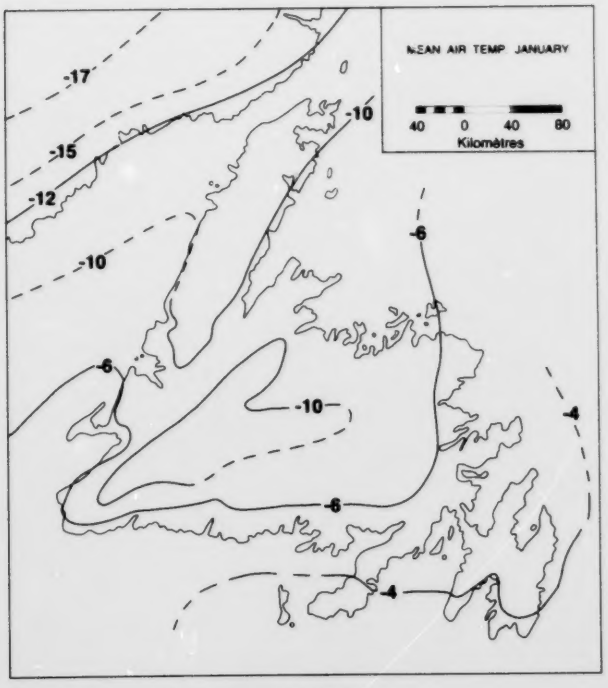
Newfoundland forests are classified as part of the Boreal forest region of Canada (Rowe 1959). Figure 6 shows that Red Indian Lake-Burgeo is located in sections B28a (Grand Falls) and B31 (Newfoundland - Labrador Barrens).

Section B28a is well forested. Balsam fir (Abies balsamea) and black spruce (Picea mariana) are the most important commercial species. Black spruce often occurs after fire but because of its tolerance it can be found on very dry as well as very wet sites. Hardwood stands of white birch (Betula papyrifera) and trembling aspen (Populus tremuloides) occur extensively throughout the area either as pure or mixed stands. White pine (Pinus strobus), white spruce (Picea glauca), red maple (Acer rubrum) and tamarack (Larix laricina) do not occur as pure stands but are found scattered throughout the area. Damman (1964) describes in detail the forest types of this forest section.

Section B31 is classified as Newfoundland-Labrador Barrens. Heath vegetation is common and there is little commercial forest. Scrubby balsam



Mean July temperature



Mean January temperature

Fig. 3. Air temperatures (Hare 1952).

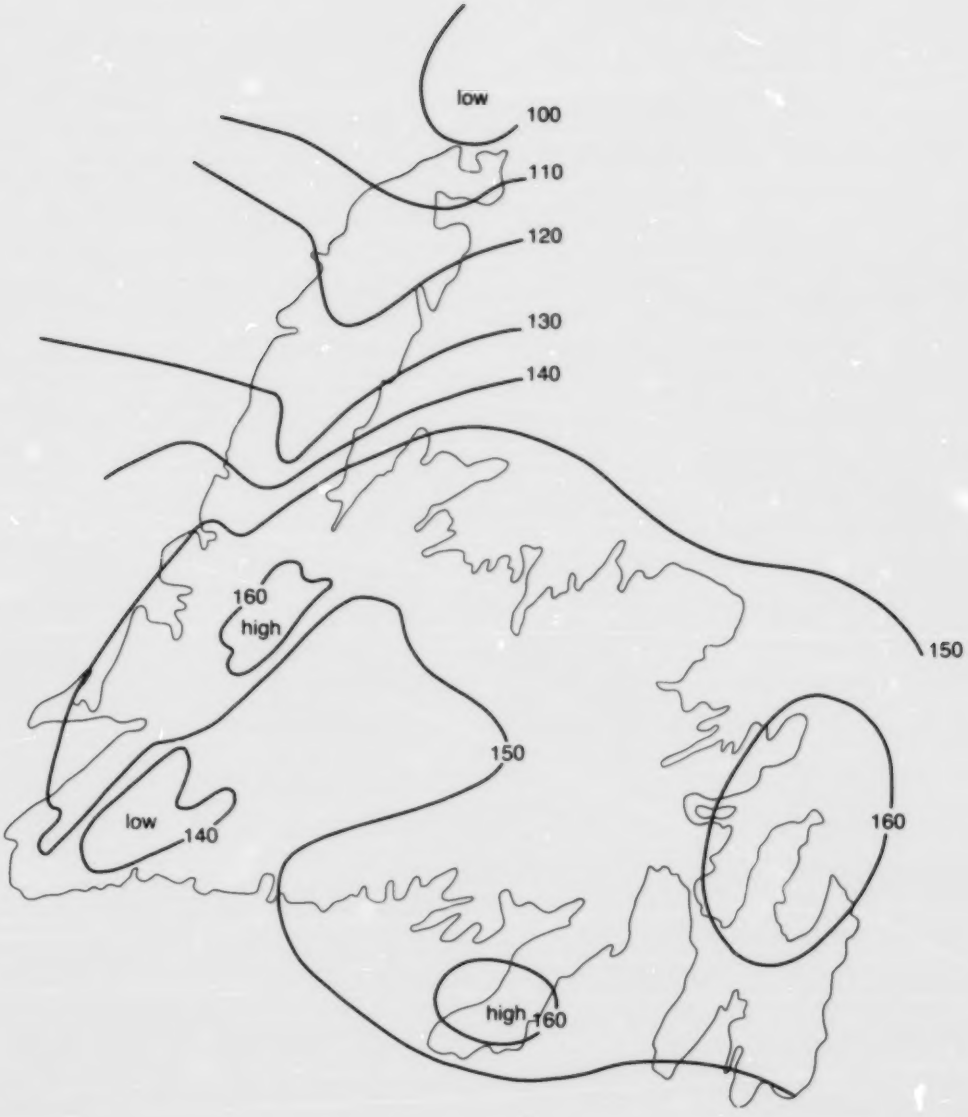


Fig. 4. Duration of vegetative season (in days) (Hare 1952).

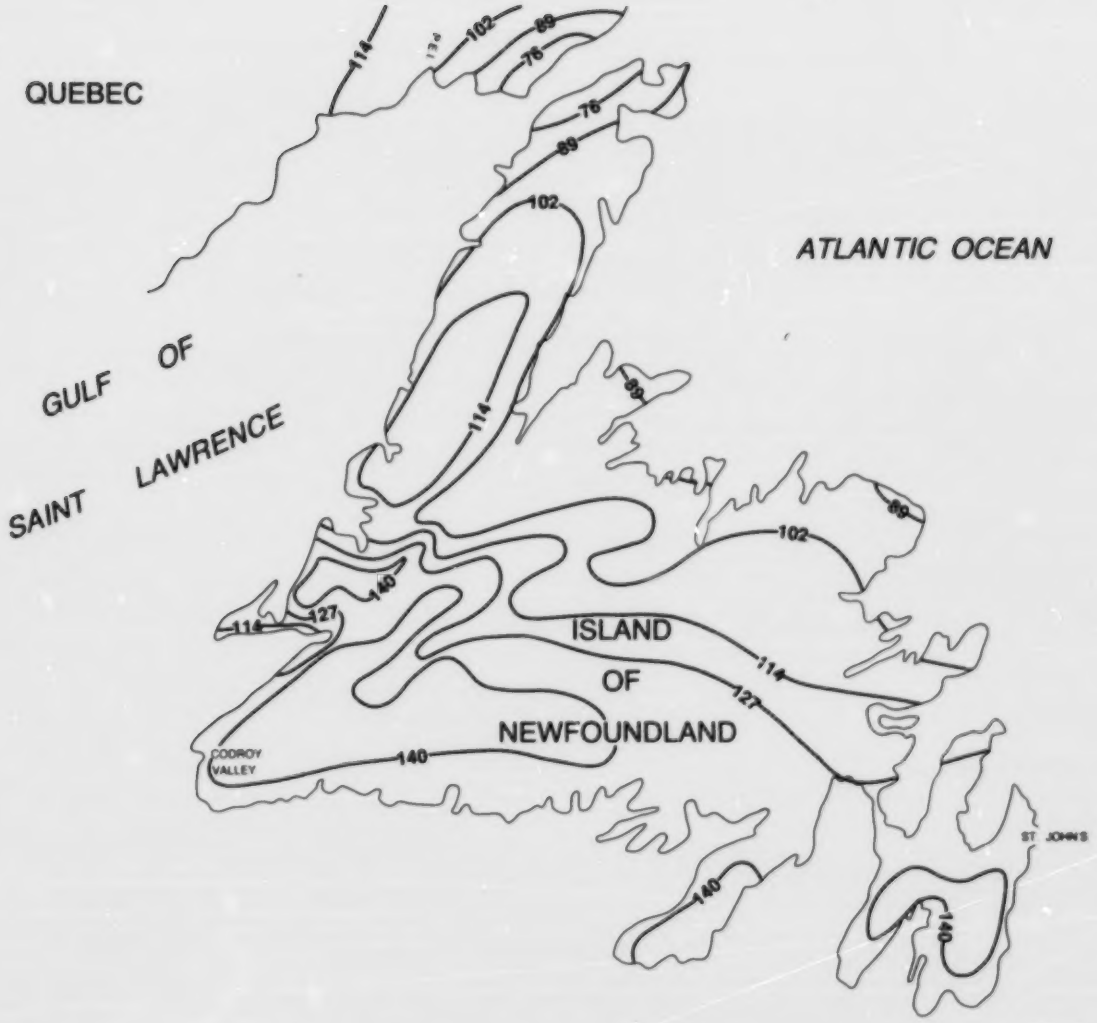


Figure 5. Mean annual precipitation (mm).

fir, black spruce and tamarack are scattered throughout with the better stands of these species occurring in sheltered river valleys.

Thick organic deposits are common in both sections but deposits become shallower and less extensive towards the south, especially near the coast where much exposed bedrock occurs.

Settlement and land use

Corner Brook, the second largest city in Newfoundland, is located in the northwest corner of the mapsheet. A large pulp and paper mill was established there in 1925 by the Newfoundland Paper and Power Company. It is now owned by Bowater Newfoundland Limited and it is the city's largest industry.

Millertown, located in the central part of the mapsheet, was successful as a sawmill town during the early part of this century. When the supply of white pine decreased, the sawmill industry declined because the waterpowered mills were equipped to handle only larger logs. With the establishment of a pulp and paper mill at Grand Falls in 1909 by the Anglo Newfoundland Development Company, Millertown became popular again as the supply town for the wood-cutting operation.

Buchans was once a prosperous mining town where copper, lead, zinc and some gold and silver were mined. The increasing cost of production of ore has resulted in a decrease in the number of jobs and generally a decline in the town's prosperity.

The Trans Canada Highway goes through Badger in the northeast part of the mapsheet and Corner Brook in the northwest. A paved road links Millertown and Buchans. A new road along the west side of the mapsheet goes south to Burgeo on the south coast (Fig. 2). The remaining part of the mapsheet area, especially the northern half, has a good distribution of forest access roads.

In addition to the forest industry centered upon the central area, dairy, poultry and vegetables are produced near Corner Brook and near Buchans. Fishing is the main occupation in Burgeo and the smaller communities along the coast.

The Red Indian Lake-Burgeo area has many opportunities for recreational activities such as camping, fishing and hunting. Many tourists are attracted here each year to fish and to hunt caribou and moose.

Survey procedure

Field data were collected during the summers of 1979 and 1980. Most of the roads in the area were travelled in a four-wheel drive vehicle. Inaccessible areas were visited either on foot or by helicopter. Observation sites were located at regular intervals with a greater concentration in the more accessible areas which have the best agricultural potential.

As a result of the field observations different map units were delineated first on 1:50 000 aerial photographs and subsequently after verification transfered onto a 1:250 000 base map with the aid of a Map-O-Graph transfer device.

Fig. 6. Map of Newfoundland, showing the Boreal forest regions according to Rowe, 1959.

B28a Grand Falls

B28b Corner Brook

B29 Northern Peninsula

B30 Avalon

B31 Newfoundland-Labrador Barrens

B32 Forest-Tundra

Some of the representative soil units were sampled for laboratory analysis. These samples provided the necessary data for the proper characterization and classification of the soils.

Main soil characteristics and soil classification

Most mineral soils in the area have developed in medium to coarse textured glacial till, but some have developed in moderately coarse textured glaciofluvial materials. Organic soils are commonly found in poorly drained depressions but often also occur on sloping topography.

In both till and outwash deposits, soils are generally classified as Humo-Ferric Podzols. Under forest litter they have a distinct light gray Ae horizon over a yellowish red B horizon if the drainage is good. When drainage is imperfect, mottles are common in the A and B horizons and colors are quite dull. The soils on the poorly drained usually depressional areas are generally classified as Gleysols.

Over most of the area the soils are infertile and very acidic with the exception of the Corner Brook area where they have developed on limestone parent material.

Extensive areas of bedrock occur particularly in the Long Range and Annieopsquotch mountains and along the south coast (Fig. 7).

The map unit symbol used in the exploratory soil survey map is a grouping of soils developed on similar parent material within a defined pedoclimatic zone. See the soil map for explanation of pedoclimatic zones.

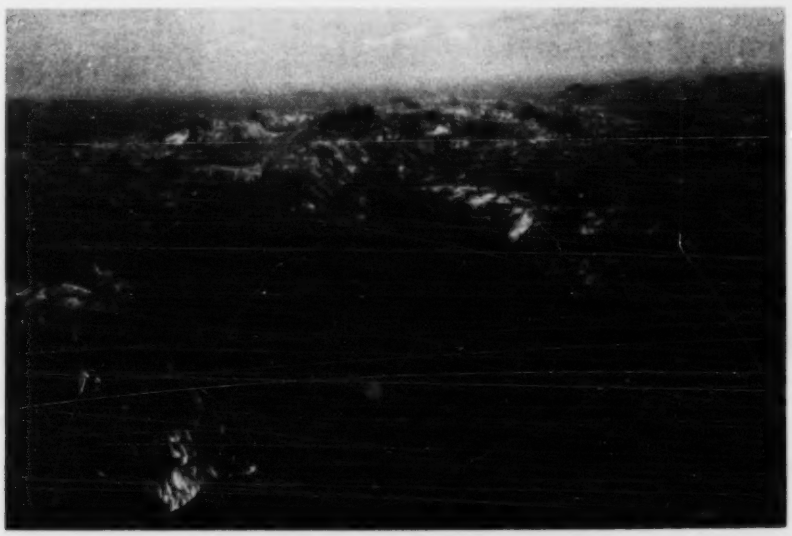


Fig. 7. Fiord along the South Coast. (Rock cliffs are usually quite steep and extend inland for several kilometers).

DESCRIPTIONS OF THE SOILS

Atlantic Lake association

The Atlantic Lake association soils in the Mountain pedoclimatic zone are somewhat similar to the Wesleyville soils in the Central pedoclimatic zone. These soils were mapped northeast of Meelpaeg Lake and south of Victoria Lake, generally as Podzols and Gleyed Podzols. They developed on bouldery coarse-textured glacial till, derived mainly from coarse-grained porphyritic granite. The soils are generally shallow and belong to the Humo-Ferric Podzol great group of soils. Some thin Bhf horizons occur in places and occasionally are thick enough to meet the criteria for Ferro-Humic Podzols. The drainage is usually good, due possibly to the coarse texture of the soils and the hummocky topography.

Figure 8 is a sketch of a landform which consists mainly of soils of the Atlantic Lake Association.

Atlantic Lake soils have many surface boulders on knolls, slopes, or in depressional locations. The vegetation is very sparse on these soils. On more favourable locations stunted black spruce and larch occur. Blackberry and blueberry can be found in scattered areas.

These shallow soils have no potential for agriculture, due to excessive stoniness, boulders and bedrock exposures.

Classification:	Orthic Dystric Brunisol
Location:	21 UWD 25006800: NTS Map Area 12A
Elevation:	300 m above mean sea level (A.M.S.L.)
Vegetation:	Stunted black spruce and larch; some blackberry and blueberry.
Soil Site:	Parent Material 1: sandy morainal till; landform classification: hummocky; slope: 10-15%; soil moisture and drainage: moderately well-drained; excessively stony; very bouldery; exceedingly rocky; present land use: rubble.
Interpretation:	CLI Agriculture: 7/PR
LF	5 to 0 cm; black; semidecomposed organic matter; plentiful, fine to coarse horizontal roots; numerous stones; wavy, abrupt boundary.
Ae	0 to 6 cm; gray; sandy loam; granular; sticky, friable, soft; plentiful fine to coarse roots; wavy, clear boundary.
Bhf	6 to 11 cm; dark reddish brown; sandy loam; granular; sticky, friable, soft; plentiful, fine roots; wavy, clear boundary.

BC	11 to 16 cm; dark brown; gravelly sandy loam; granular; very friable; few, fine oblique roots; wavy, abrupt boundary.
C	16 cm +; very dark grayish brown; gravelly sandy loam; granular; very friable; very few, very fine roots.

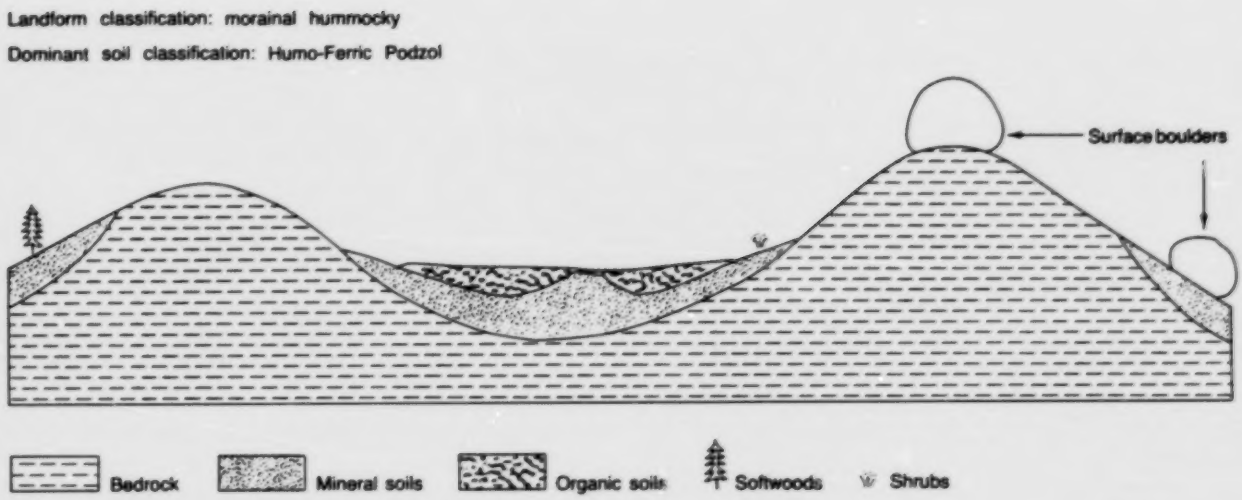


Fig. 8. Sketch of a landform with soils of the Atlantic Lake association.

Berry Hill Pond association

The Berry Hill Pond soils, mapped extensively in the Gander Lake mapsheet, occur here in only one small parcel in the southeastern part of the Red Indian Lake-Burgeo area, within the Jubilee Lake pedoclimatic zone.

The parent material of these soils is medium to moderately coarse-textured, light olive brown glacial till derived from slates, siltstone and sandstone with minor amounts of volcanic rocks, schists and phyllites. These soils were classified mainly as Orthic Humo-Ferric Podzols and Gleyed Humo-Ferric Podzols on this mapsheet. On the Gander Lake mapsheet the association includes Orthic Gleysols.

These soils occur as a morainal blanket over rolling bedrock. The soils range from moderately well to imperfectly drained. The imperfect drainage occurs on the depressions and slopes whereas the better-drained soils occur on top of the slopes. These soils have very little or no potential for agriculture because most of them are very to exceedingly stony.

Figure 9 is a sketch of a landform with soils of the Berry Hill Pond association.

Classification:	Gleyed Humo-Ferric Podzol
Location:	Military Grid Ref. 21 UWD 6350 3220; NTS Map Area 12A 1.
Elevation:	290 M (A.M.S.L.)
Vegetation:	Kalmia, Labrador tea, caribou moss, black spruce, tamarack.
Soil Site:	Parent material 1: fine loamy, depth to bedrock is 0.3 m; Landform classification: hummocky and inclined; slope of class 6 (16-30%); soil moisture and drainage: imperfectly drained, 0.3 m to watertable; very stony; very rocky and exceedingly rocky; present land use: unproductive woodland.
Interpretations:	CLI Agriculture: 7/PR.
LF	8 to 0 cm; black; slightly decomposed organic matter; abundant, fine, medium, horizontal roots; wavy, clear boundary.
Aeg	0 to 2 cm; dark gray; silt loam; few, medium prominent mottles; friable; plentiful, fine roots; wavy, clear boundary.
Bhfg	2 to 8 cm; dark reddish brown; sandy loam; few, medium, prominent mottles; granular; friable; plentiful, fine roots, wavy, clear boundary.

Bfg1	8 to 13 cm; dark reddish brown; sandy loam; few, medium prominent mottles; granular; friable; few, fine roots, wavy, clear boundary.
Bfg2	13 to 21 cm; dark borwn; sandy loam; few, medium prominent mottles; granular; friable; few, fine roots; wavy, clear boundary.
Ccgj	21 cm +; olive; loam; few, prominent mottles; weak, medium, angular blocky; slightly cemented.

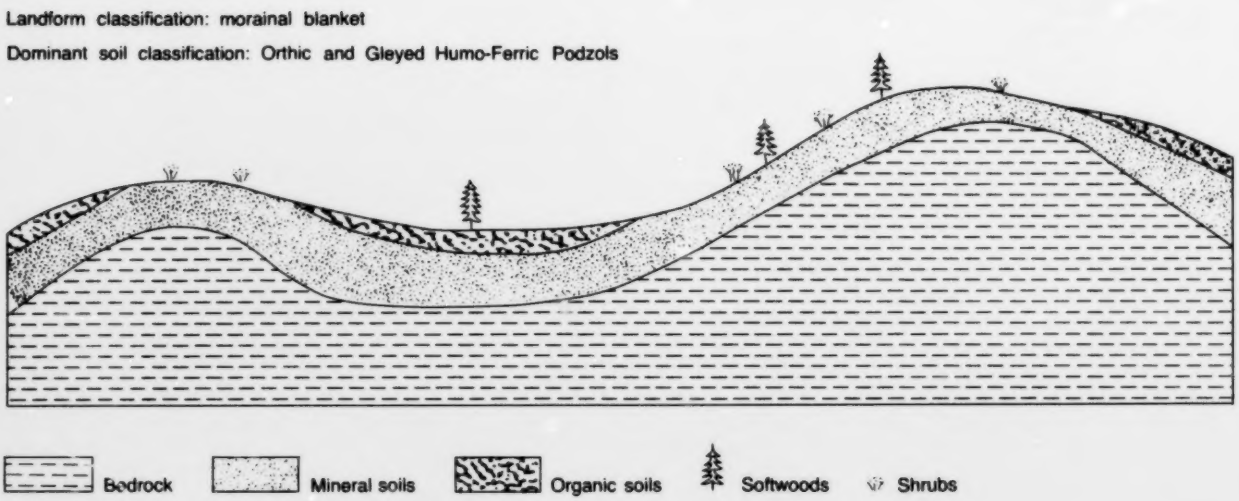


Fig. 9. Sketch of a landform with soils of the Berry Hill Pond association.

Birchy Ridge association

Birchy Ridge soils were mapped in three locations north of Grand Lake within the Central Newfoundland pedoclimatic zone.

The parent material of these soils is coarse textured glacial till derived from gray siltstone, gray shale, sandstone and granite.

The surface expression was either inclined (1), rolling (2) or hummocky (3) (Fig. 10). Where the surface expression was inclined or hummocky, the soil was usually less than 1 m deep.

These soils are fairly coarse textured and well drained. They are classified mainly as Orthic Humo-Ferric Podzols. Stones occupy 15-50% of the surface area and exposed bedrock occurs frequently.

A small portion of the best of these soils could be improved as pasture but the majority would have no potential for agricultural use due mainly to stoniness, shallowness to bedrock and unsuitable climate.

Classification:	Orthic Humo-Ferric Podzol. Soil Family: loamy sandy-skeletal, shallow lithic, acid, cold, perhumid.
Location:	Military Grid Ref. 21 UVE 9800 6700; NTS Map Area 12H 4.
Vegetation:	Balsam fir, white birch, plume moss, feather moss.
Soil Site:	Parent Material 1: very gravelly loam till over shattered shale, siltstone and mudstone bedrock; extremely to strongly acidic; landform classification: hummocky; slope: 7% simple slope of Class 4 (6-9%), facing east, site at upper slope position; soil moisture and drainage: perhumid, moderately well drained, moderately previous; very stony; moderately rocky; present land use: productive woodland.
Interpretation:	CLI Agriculture: 7/P.
LH	5 to 0 cm; black (10YR 2/1 m); organic material derived from leaves and twigs; plentiful, fine medium and coarse roots; smooth, abrupt boundary.
Ae	0 to 3 cm; gray (10YR 6/1 m, 7/1 d); sandy loam; weak, fine, granular; sticky, friable, soft; plentiful, fine medium and coarse roots; smooth, abrupt boundary.
Bf	3 to 20 cm; brownish yellow (10YR 6/6 m); loam; fine, granular; friable, soft, plastic; plentiful and abundant fine and medium roots; wavy, clear boundary.
Bfgj	20 to 45 cm; yellowish brown (10YR 5/6 m); gravelly loam; few, faint mottles; amorphous breaking to weak, fine, granular; sticky, friable, soft, plastic; few fine and medium roots; 30% shaly coarse fragments; wavy, gradual boundary.

BC	45 to 60 cm; olive brown (2.5Y 4/4 m); very gravelly loam; amorphous; 80% shaly coarse fragments.
R	60 cm +; bedrock.

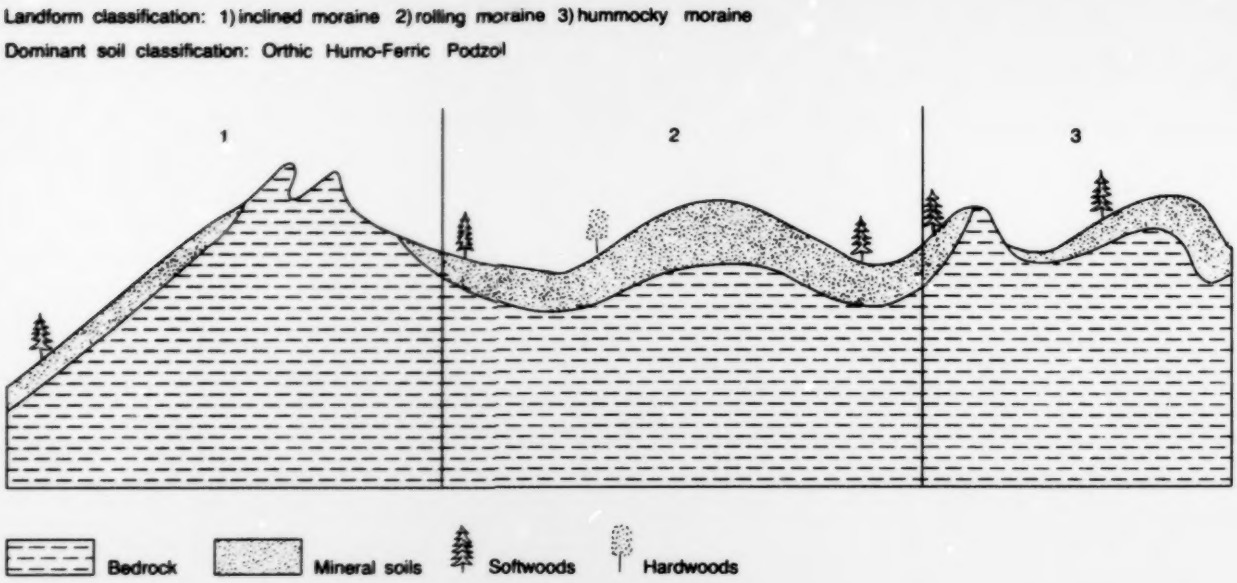


Fig. 10. Sketch of landforms with soils of the Birchy Ridge association.

Cox's Cove association

Located in the extreme northwest corner of the mapsheet, the Cox's Cove soils lie within the Bay St. George pedoclimatic zone. Their extent is limited on this mapsheet but they are more extensive on adjoining sheets to the north and west.

The parent material is medium textured, grayish brown glacial till derived from gray shales, slate, limestone and sandstone. Bedrock exposure is common but where not visible it is usually less than 1 m from the surface.

A sketch of landforms with soils of the Cox's Cove association is presented in Fig. 11.

Cox's Cove soils were mapped in one location. They are mainly Orthic Humo-Ferric Podzols and occur as morainal veneer over hummocky bedrock. Drainage is good due possibly to the coarse texture of the soil and the steep topography.

These soils have very little potential for agriculture because of the steep topography and the common occurrence of rock outcrops. A small percentage of the best of these soils could be improved as pasture.

Classification: Orthic Humo-Ferric Podzol. Soil family: Clayey, mixed nonclay, extremely shallow lithic, acid, cold, perhumid. Soil Phases: gently sloping and slightly stony and slightly rocky.

Location: Military Grid Ref. 21 UVE 1960 3910; NTS Map Area 12G 1.

Vegetation: Forest, softwood, regenerating. Balsam fir, white birch. raspberries, dogwood, twinflower, woodfern, Pleurozium.

Soil Site: Parent Material 1: moderately thin clayey till extremely to strongly acidic derived from sandstone and slate; depth to bedrock is 0.2 m; slope: complex slope of class 3 (2-5%), facing southwest, site at upper slope position; soil moisture and drainage: perhumid, moderately well drained, moderately pervious, slow surface runoff, seepage absent; slightly stony; slightly rocky; present land use: unproductive woodland.

Interpretations: CLI Agriculture: 5/R.

LF 5 to 0 cm; horizon moist; matrix moist; material composition moderate decomposition; few medium horizontal roots; cobbly coarse fragments; wavy, clear boundary 3-7 cm thick.

Ae 0 to 2 cm; light brownish gray (10YR 6/2 m); gravelly silty clay loam; moderate, medium, subangular blocky; sticky, friable, slightly hard, very plastic; plentiful fine horizontal roots; common very fine random pores; common, thin clay films on ped faces; cobbly coarse fragments; wavy, clear boundary 1-3 cm thick.

Bfgj	2 to 17 cm; yellowish red (5YR 4.5/6 m); gravelly clay; common, coarse, faint, dark reddish brown (5YR 3/2 m) mottles; weak, coarse, subangular blocky; slightly sticky, friable, slightly hard, plastic; few very fine horizontal roots; common very fine random pores; common, very thin yellowish red clay films on ped faces; cobbly coarse fragments, 12-17 cm thick.
R	17 cm + bedrock.

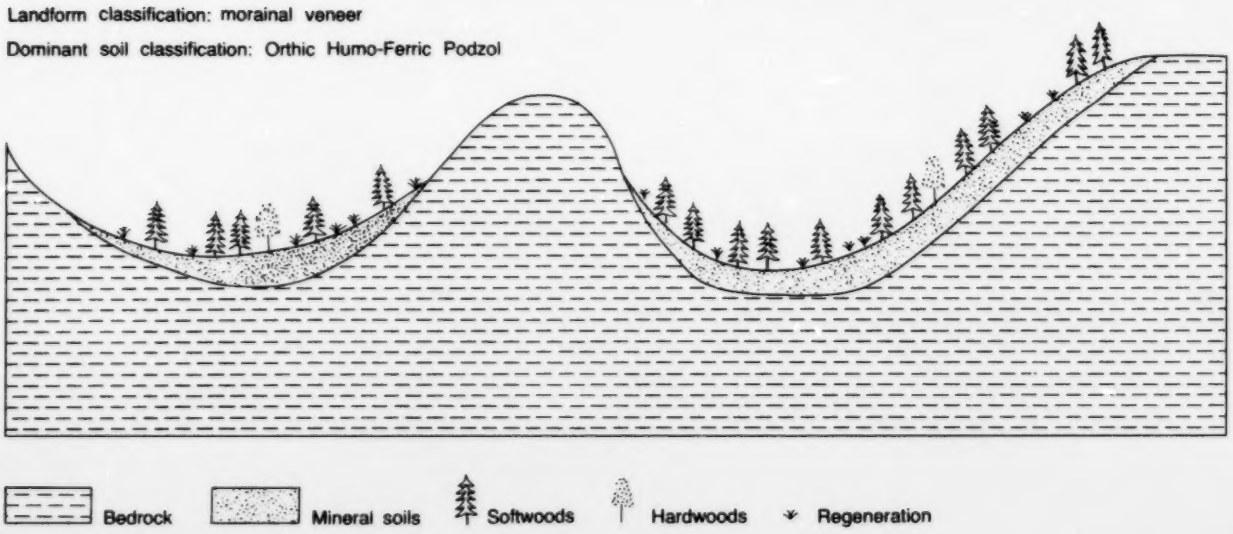


Fig. 11. Sketch of landforms with soils of the Cox's Cove association.

Deadwolf Pond Association

Deadwolf Pond soils occur in only one location on the mapsheet as the dominant soil. They occur also as subdominant with Red Indian and Gander soils.

The location of dominant Deadwolf Pond soils is east of Sandy Lake within the Central Newfoundland pedoclimatic zone. These organic soils are developed on domed bogs, several of which occur in the area. The mineral soils in depressions between the domes contain either Red Indian, Gander or Mint Pond soils (Fig. 12). When Deadwolf Pond soils occur as subdominant they are mapped as sloping and domed bogs.

Deadwolf Pond soils are mainly Typic Fibrisols. The mainly fibric peat material is derived mostly from sphagnum moss, and is underlain by unconsolidated material or bedrock.

These soils show good potential for agricultural development and they could provide a good source of horticultural peat. Their location and limited extent among mineral soils may restrict their use somewhat, however, this would be determined by demand.

Two generalized descriptions of the Deadwolf Pond soils follows:

Classification:	Typic Fibrisol.
Location:	Military Grid Ref. 21 UYD 0420 7510
Vegetation:	White pine, black spruce, juniper, Labrador tea, caribou moss.
Soil Site:	Landform classification: domed bog; slope: 2% simple slope Class 3 (2-5%); site at crest of slope; slightly mounded microtopography; 10% of area with water.
Special note:	Good for horitcultural peat and forestry.
Of	0 to 30 cm; 100% sphagnum mosses; von Post, H3.
Of2	30 to 550 cm; 100% sphagnum mosses; von Post, H3.

Classification:	Terric Humisol.
Location:	Military Grid Ref. 21 UYD 0450 757D.
Vegetation:	White pine (few), Labrador tea, lambkill, grasses.
Soil Site:	Landform classification: flat bog; slope: class 1 (0-0.5%); site at middle slope; slightly mounded microtopography.

Of	0 to 20 cm; 100% sphagnum mosses; von Post, H1.
Oh1	20 to 40 cm; 100% sphagnum mosses; von Post, H7.
Oh2	40 to 80 cm; 100% sphagnum mosses; von Post, H9; charcoal present.
Oh3	80 to 90 cm; 100 sphagnum mosses; von Post, H9.
Cg	90 cm + ; sand (outwash material).

Landform classification: domed bog

Dominant soil classification: Typic Fibrisols

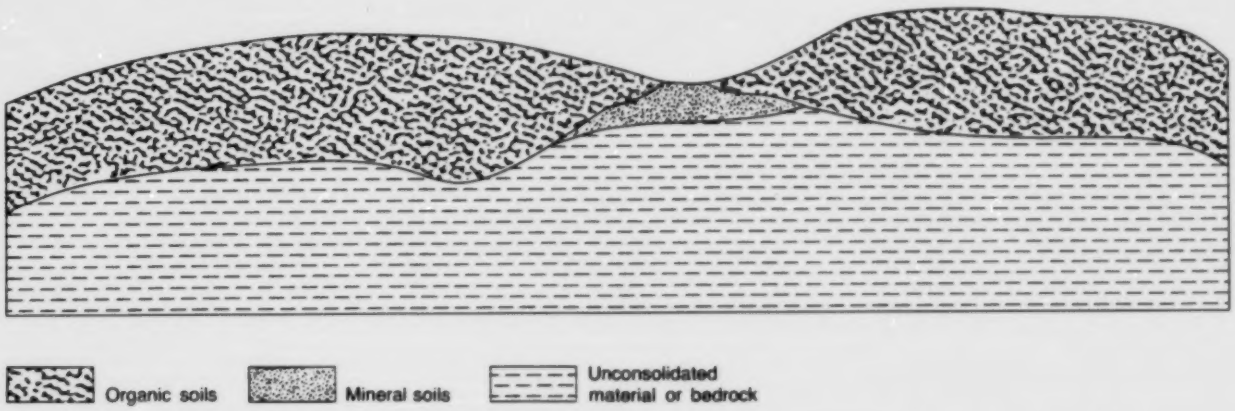


Fig. 12. Sketch of a landform with soils of the Deadwolf Pond association.

Ebbegunbaeg association

Ebbegunbaeg soils occur as dominant soils in the southwest part of the mapsheet within the Mountain pedoclimatic zone. They also occur with Silver Mountain soils or with Atlantic Lake soils.

These soils developed on sloping bogs are classified mainly as Typic Mesisols. They consist of moderately decomposed sphagnum peat underlain by moderately coarse textured glacial till or bedrock. They occur in the areas between mineral soils, knobs or hummocks (Fig. 13).

These organic soils have good potential as a source of fuel peat. Their isolated location could cause problems because they may be expensive to mine.

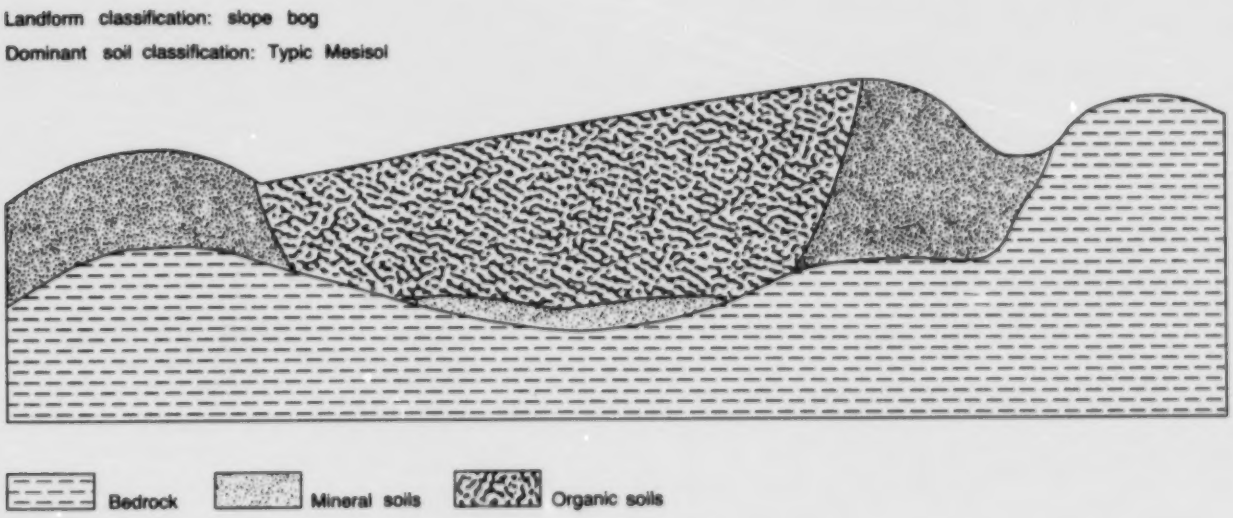


Fig. 13. Sketch of a landform with soils of the Ebbegunbaeg association.

Gander association

Soils of the Gander Association were mapped extensively in the Gander Lake and Botwood mapsheets in the Central Newfoundland Pedoclimatic Zone. They extend into the northeast corner of Red Indian Lake-Burgeo mapsheet and were mapped in three locations.

The parent material of Gander soils is moderately coarse textured olive glacial till derived from gray and black slate, shale, siltstone, and minor amounts of granite.

Figure 14 is a schematic representation of the three locations of Gander soils that occur on the mapsheet. Section 1 contains mainly shallow, Gleyed Humo-Ferric Podzols over inclined bedrock. The upper parts of the slopes usually have better drainage where Orthic Humo-Ferric Podzols occur. Section 2 represents a rolling moraine on which the drainage is moderate except in the depressional areas where it would range from imperfect to poor. These soils are classified mainly as Orthic Humo-Ferric Podzols with a scattered Gleyed Humo-Ferric Podzol. Section 3 represents an undulating moraine with Gleyed Humo-Ferric Podzols dominating.

Some of the mineral soils in this area show some potential for agriculture. Stoniness, drainage, slope and shallowness could cause problems. Some small farms have already been established on these soils and are producing carrots, turnip, potatoes and cabbage. Shallow plowing would be necessary in areas where the B horizon is thin.

Classification:	Orthic Humo-Ferric Podzol. Soil family: siliceous, acid, humid. Soil phases: very gently sloping and moderately stony.
Location:	Military Grid Ref. 21 UWE 3610 860; NTS Map Area 12A 15.
Elevation:	175 m (A.M.S.L.)
Soil Site:	Parent Material 1: coarse loamy, very strongly acidic till derived from mixed sedimentary and some igneous rocks; undulating; slope of Class 3 (2-5%), facing north, site at middle position, slightly mounded microtopography, 10 m long; soil moisture and drainage: humid, well-drained, moderately pervious, moderate surface runoff, seepage absent, 3 m to apparent watertable; moderately stony; nonrocky; present land use: productive woodland.
Interpretations:	CLI Agriculture: 4/PC; CLI Forestry: 3/FM; Engineering suitability 1: high suitability as source of topsoil, moderately stony; 2: high suitability as source of gravel, moderately stony.
L	12 to 9 cm; dark reddish brown (5YR 2.5/2 m); material composed of 30% leaves, 30% needles, 30% feathermoss, and 10% wood fragments, no decomposition; slightly hard woody material 1 cm thick, less than 10% by volume; plentiful medium horizontal exped roots; highly porous many coarse random exped continuous dendritic interstitial pores; wavy, clear boundary; extremely acidic; 2-4 cm thick.

F	9 to 0 cm; black (5YR 2.5/1 m); material composed of 30% leaves, 30% needles, 30% feathermoss and 10% wood fragments, slight decomposition; slightly hard woody material 1 cm thick, <10% by volume; plentiful coarse horizontal exped roots; highly porous many coarse random exped continuous dendritic interstitial pores; wavy, clear boundary; extremely acidic; 5-12 cm thick.
Ae	0 to 2 cm; reddish gray (5YR 5/2 m); loam; amorphous; plentiful coarse horizontal exped roots; moderately porous common fine random continuous pores; 10% gravelly coarse fragments; wavy, clear boundary; extremely acidic; 1-5 cm thick.
Bf1	2 to 22 cm; strong brown, (7.5YR 5/6 m); loam; weak, fine, subangular blocky; plentiful coarse horizontal exped roots; moderately porous common fine pores; wavy, clear boundary; extremely acidic; 15-25 cm thick.
Bf2	22 to 50 cm; brown (7.5YR 4/4 m); loam; weak, fine, subangular blocky; few fine oblique exped roots; many fine continuous pores; wavy, gradual boundary; very strongly acidic; 15-35 cm thick.
C	50 cm +; brown (7.5YR 4/4 m); loam; single grain; weakly but continuously cemented by silica (iron); few fine oblique roots; many fine contiruous pores; very strongly acidic.

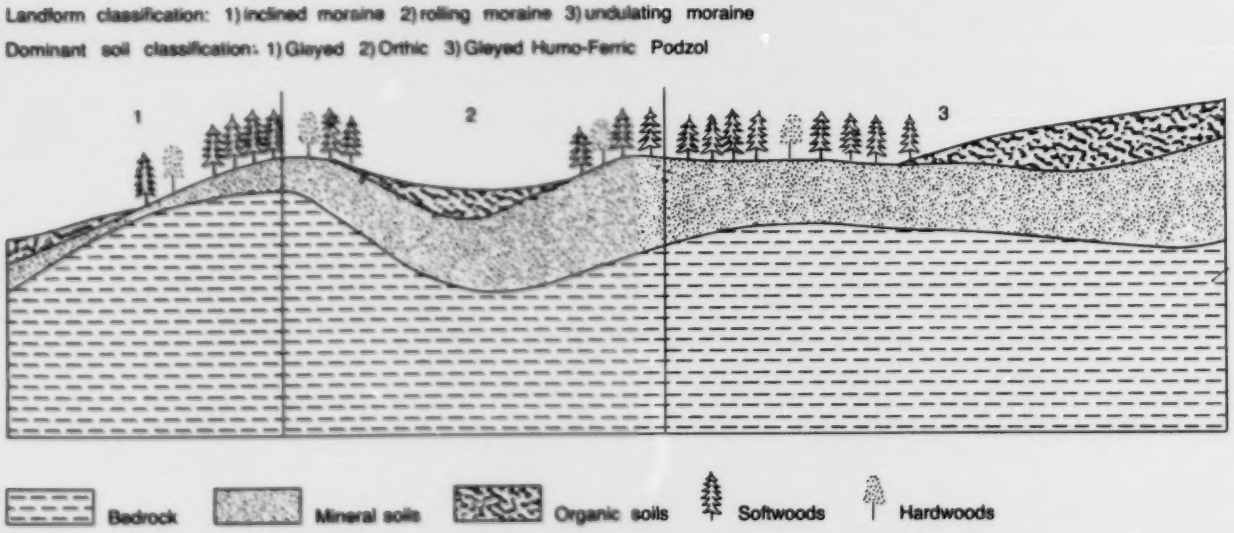


Fig. 14. Sketch of landforms with soils of the Gander association.

Lomond association

Lomond soils occur in one location north of Grand Lake, which is in the northwest corner of the mapsheet and within the Central Newfoundland pedoclimatic zone.

The parent material of these soils is coarse textured dark grayish brown glacial till derived from granitic gneiss and granite.

These soils are classified mainly as Orthic Humo-Ferric Podzols, but Gleyed Humo-Ferric Podzols are quite common. The soils occur as morainal veneer over inclined bedrock having slopes in a range of 16-30%. Hummocks which occur on the incline could not be separated on this small scale of mapping (Fig. 15). The drainage ranges from well on the top of knolls to imperfect in the small depressional areas. Moderate drainage occurs mainly on the inclines. The soils are exceedingly stony and moderately rocky.

Because of stoniness, steep topography, occurrence of rock outcrops and shallowness, these soils have no potential for agricultural use.

Classification:	Orthic Humo-Ferric Podzol.
Location:	Military Grid Ref. 21 UVE 5510 2150; NTS Map Area 12A 13.
Elevation:	91 m (A.M.S.L.)
Vegetation:	Balsam fir, white birch, yellow birch, Pleurozium moss cover.
Soil Site:	Parent Material 1: sandy till; Landform Classification: hummocky; Slope: slope of Class 6 (16-30%); Soil drainage: well drained; moderately stony; Present land use: productive woodland.
Interpretations:	CLI Agriculture: 7/T.
LF	5 to 0 cm; slightly decomposed leaves, needles and mosses.
Ae	0 to 6 cm; light brownish gray; sandy loam.
Bf	6 to 18 cm; dark brown; loamy sand; granular; abundant, fine roots; wavy gradual boundary.
BC	18 to 53 cm; strong brown; sand; granular; very few, very fine roots.
C	53 cm +; brown; sand; granular; very few, very fine roots.

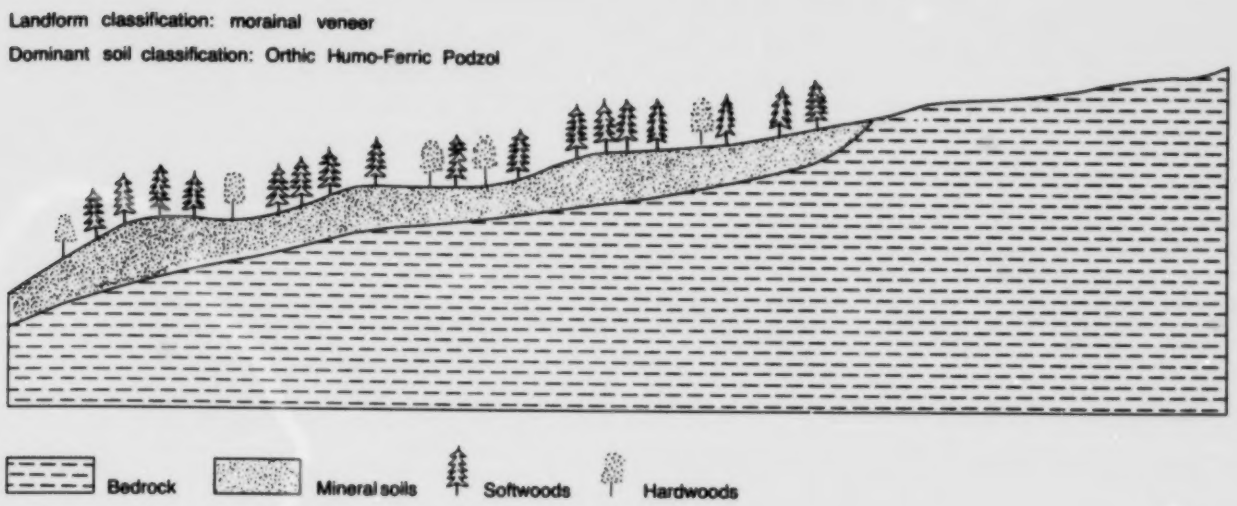


Fig. 15. Sketch of a landform with soils of the Lomond association.

Mint Pond association

Mint Pond soils are mapped in one location in the northeast part of the mapsheet within the Central Newfoundland Pedoclimatic Zone.

These soils are classified mainly as Terric Mesisols. The peat is derived predominantly from sedges and grasses. It has very little potential for agricultural use because it is too decomposed. Fuel peat would be discouraged because of the shallowness of the soils.

The dominant landform of the Mint Pond soils on this mapsheet is a sloping fen (Fig. 16).

Classification:	Terric Humic Fibrisol.
Location:	Military Grid Ref. 21 UYD 0280 7430.
Vegetation:	Moss with some sedges.
Soil Site:	Sloping Fen; Slope: 2% simple slope Class 2 (0.5-2.0%), site at middle of slope, slightly mounded microtopography; 30% of area with water.

Om	0 to 30 cm; 100% sphagnum mosses; von Post: H5.
Of	30 to 100 cm; dominantly sedge; von Post: H4.
Oh	100 to 115 cm; dominantly sedge; von Post: H7.
Cg	115 cm; sand.

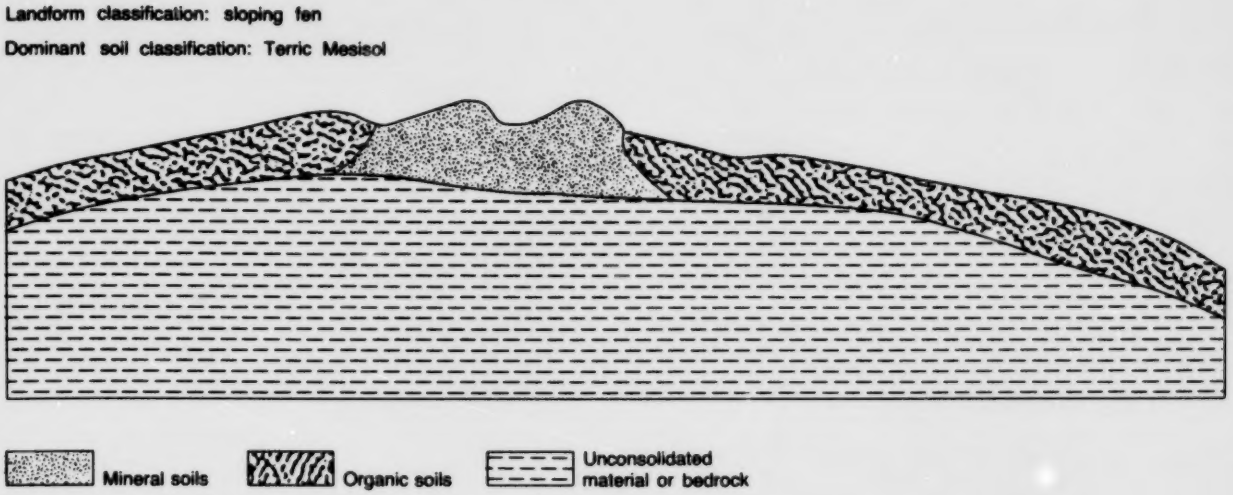


Fig. 16. Sketch of a landform with soils of the Mint Pond association.

New Bay association

New Bay soils are mapped in two locations in the northeast part of the mapsheet within the Central Newfoundland pedoclimatic zone.

Figure 17 is a sketch of two landform types which contain New Bay and Mint Pond soils. Area 1 contains approximately eighty to one hundred percent New Bay soils while Area 2 represents approximately sixty percent New Bay soils and forty percent Mint Pond soils.

Section 1 contains predominantly imperfectly drained Gleyed Humo-Ferric Podzols on a rolling moraine. The slopes range from 6-9% and the soils are exceedingly stony and very rocky.

In Section 2 New Bay soils occur on hummocky moraine having slopes of 16-30%. The drainage on these steeper hummocks is good and the soils are classified as Orthic Humo-Ferric Podzols. Although the soils in this area are exceedingly stony, no rock outcrops occur.

The parent material of New Bay soils is coarse to moderately coarse textured, light olive brown glacial till derived from medium grained granite, granodiorite, diorite and other volcanic rocks.

New Bay soils are unsuitable for agricultural use.

Classification:	Gleyed Humo-Ferric Podzol. Soil Family: coarse loamy, mixed nonclay, acid, cold, perhumid.
Location:	Military Grid Ref. 21 UWE 6750 3280; NTS Map Area 12H 1.
Vegetation:	Forest, softwood, mature. Key species listing: balsam fir, ferns and club moss.
Soil Site:	Parent material 1: coarse loamy and coarse silty, extremely to strongly acidic till; landform classification: morainal, loamy, inclined; Slope: slope of Class 5 (10-15%), facing east, site at lower slope position, moderately mounded microtopography, 1500 m long; Soil moisture and drainage: perhumid, poorly drained, slowly pervious, slow surface runoff, seepage present, 0.4 m to perched watertable; exceedingly stony; nonrocky; Present land use: productive woodland.
Interpretations:	CLI Agriculture: 7/PW; CLI Forestry: 4/F.
LFH	13 to 0 cm; 80% needles, and 20% herbaceous fragments, moderate decomposition; plentiful fine and medium horizontal roots; wavy, clear boundary; 10 to 15 cm thick.
Bf	0 to 13 cm; dark brown (10YR 3/3 m); very gravelly loam; common, medium, faint, dark yellowish brown (10 YR 4/3) mottles; weak, fine, subangular blocky; slightly sticky, very friable, slightly hard, slightly plastic; few fine and medium roots; common fine pores; few, thin clay films in many voids and channels and on some vertical and horizontal ped faces, dark brown (10 YR 3/3); cobbly coarse fragments; wavy, gradual boundary; 9 to 13 cm thick.

Bmg	13 to 29 cm; dark brown (10YR 4/3 m); gravelly sandy loam; many, medium, faint dark brown (10YR 4/3) mottles; massive; slightly sticky, very friable, slightly hard, slightly plastic; very few fine and medium roots; common fine pores; few, very thin clay films in many voids and channels and on some vertical and horizontal ped faces, dark brown (10 YR 3/3); cobbly coarse fragments; wavy, gradual boundary; 9 to 22 cm thick.
BCg	29 to 56 cm; dark brown (10YR 3/3 m); gravelly sandy loam; common, medium, faint, dark brown (10 YR 4/3) mottles; massive; slightly sticky, friable, slightly hard, slightly plastic; very few fine random roots; common very fine pores; smooth, clear boundary; 22 to 27 cm thick.
Cg	56 cm +; brown (10YR 5/3 m) and reddish brown (5YR 4/4 m); very gravelly sandy loam; many medium faint dark brown (10 YR 4/3) mottles; moderate, medium, platy; nonsticky, firm, very hard, nonplastic; strongly cemented by silica (iron).

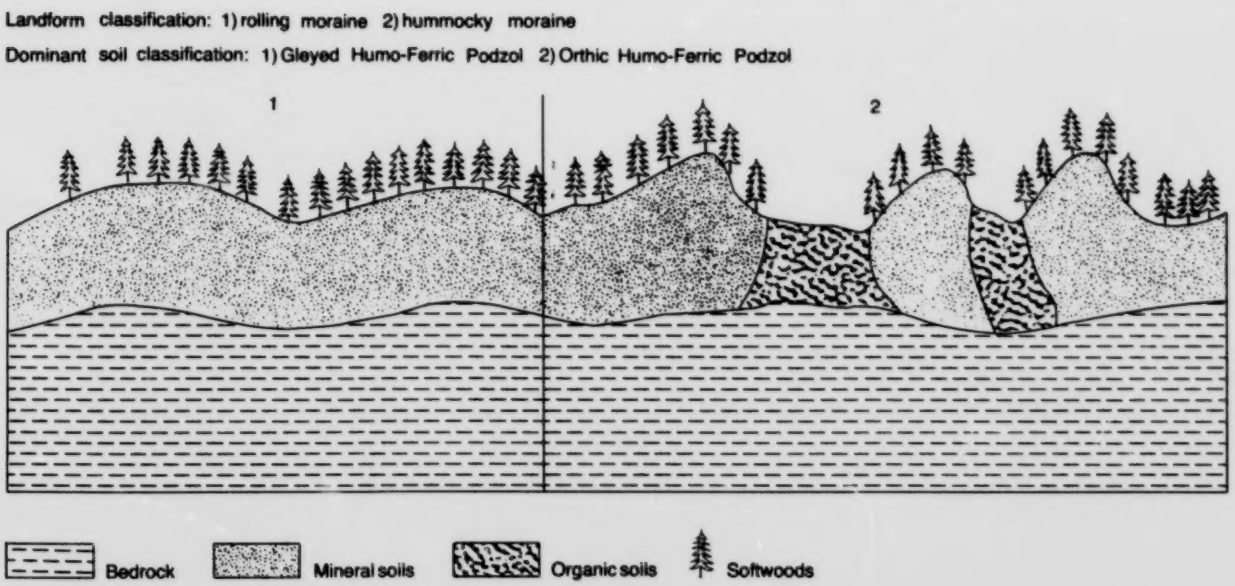


Fig. 17. Sketch of landforms with soils of the New Bay association.

North Lake association

North Lake soils were mapped in four locations to the east and south of Corner Brook, which is in the northwest part of the mapsheet and within the Mountain pedoclimatic zone. Three of these areas contained eighty percent or more of North Lake soils while the fourth included approximately thirty percent of rock outcrops.

The parent material of these soils is moderately coarse textured, dark, yellowish brown to reddish brown glacial till derived from sandstone, shale and dolomitic limestone.

Figure 18 is a sketch of four different landforms which contain soils of the North Lake association.

Section 1 has a slope of 16-30%. The soils are shallow, imperfectly drained and are classified as Gleyed Humo-Ferric Podzols. They are moderately stony and very rocky.

Section 2 contains mostly morainal veneer over hummocky bedrock. The soils are very stony and moderately rocky. Their drainage is good and they are classified as Orthic Humo-Ferric Podzols.

Section 3 represents a morainal veneer over hummocky bedrock with slopes of 31-45%. The soil drainage is good and they are classified as Orthic Humo-Ferric Podzols. The soils are very stony and moderately rocky.

Section 4 shows a morainal veneer over ridged bedrock with a slope of 16-30% and the soils are moderately stony. They are classified as Orthic Humo-Ferric Podzols with moderately good drainage.

These soils have very little agricultural potential because of steep topography and shallowness to bedrock. However, a few small areas were rated capability class 4 where slopes, stoniness and rockiness were not as serious a problem.

Classification:	Gleyed Humo-Ferric Podzol.
Location:	Military Grid Ref. 21 UVE 3620 2560; NTS Map Area 12A 13.
Elevation:	0.3 m (A.M.S.L.)
Vegetation:	Cutover, alders, white and yellow birch, maple, balsam fir regeneration and ground cedar.
Soil Site:	Parent Material 1: coarse loamy; Landform Classification: rolling and undulating; Slope: slope of Class 4 (6-9%); Soil moisture and drainage: moderately well drained and imperfectly drained; slightly stony and moderately stony.

Interpretations:	CLI Agriculture: 4/TP.
LF	3 to 0 cm; slightly decomposed leaf and wood fragments; abundant, medium roots; abrupt boundary.
Ae	0 to 4 cm; light gray; sandy loam; fine, granular; nonsticky, very friable; plentiful, medium roots; gradual boundary.
Bfg	4 to 19 cm; brown; loam; granular; many, distinct, medium, yellowish brown mottles; plentiful, fine roots; granular; slightly sticky; clear boundary.
BC	19 to 44 cm; brown; sandy loam; granular; wavy boundary.
C	44 cm +; yellowish brown; loam; few, fine roots.

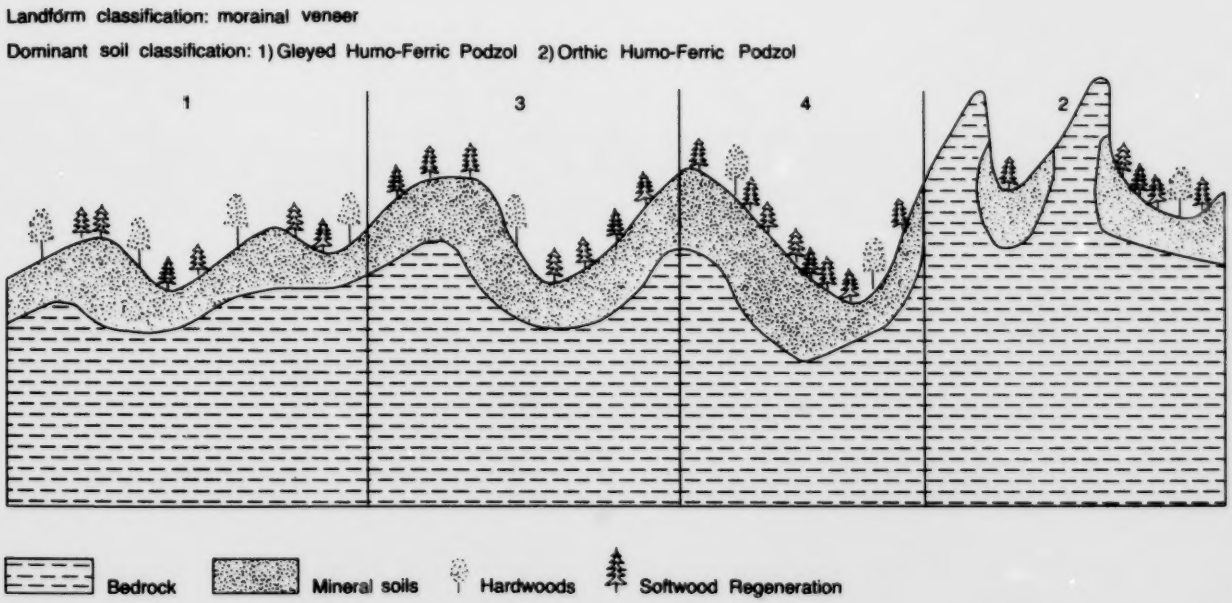


Fig. 18. Sketch of landforms with soils of the North Lake association.

Pitt's Pond association

Pitt's Pond soils are mapped in three locations on the mapsheet. One is in the northeast and the other two are in the northwest. All lie within Central Newfoundland pedoclimatic zone. Their parent material is coarse textured, stratified glaciofluvial sands and gravels of mixed origin.

Section 1, Figure 19, contains rapidly drained Orthic Humo-Ferric Podzols. They occur on small hummocks and are exceedingly stony and moderately rocky.

Section 2 has good drainage and consists mainly of Orthic Humo-Ferric Podzols. They are slightly stony and nonrocky and occur on an inclined moraine.

Approximately half of Section 2 is rated capability class 4 for agriculture. Moisture deficiency could be a problem because of the coarse texture of the soil. However, irrigation is possible because of available water from the Humber River. Less than half of section 1 is rated capability class 5 because of the amount of stones present. The remaining part of the area is rated class 7.

Section 3 contains mainly Orthic Humo-Ferric Podzols on a terraced landform. These soils are well drained due mainly to their coarse texture. Some of them are presently used for cropland, however, some could possibly be used for vegetable growing if droughtiness could be overcome.

Classification:	Orthic Humo-Ferric Podzol. Soil Family: loamy skeletal, mixed nonclay, acid, cold, subhumid. Soil phases: Level and moderately stony and nonrocky.
Location:	Military Grid Ref. 21 UWE 5910 8020; NTS Map Area 12H 8.
Vegetation:	Key Species Listing: Black spruce, speckled alder, trembling aspen, dogwood, Pleurozium, twinflower and rhodora.
Soil Site:	Parent Material 1: skeletal, extremely to strongly acid, glaciofluvial, mixed; Parent Material 2: fragmental (stones, cobbles and gravel), extremely to strongly acidic, gravelly, glaciofluvial, level; Slope: simple slope of Class 1 (0-0.5%); Soil moisture and drainage: subhumid, well drained, rapidly pervious, seepage absent; moderately stony; nonrocky; Present land use: productive woodland.
Interpretations:	CLI Agriculture: 4/PF.
LF	10 to 0 cm; needles and wood fragments slightly decomposed; plentiful coarse roots; many fine random discontinuous pores; wavy, abrupt boundary; 9-13 cm thick.

Ae	0 to 2 cm; dark reddish gray (5YR 4/2 m;) loam; very weak, very fine to fine, granular; nonsticky, very friable soft, nonplastic; plentiful medium roots; few very fine random discontinuous pores; gravelly coarse fragments; broken, clear boundary; 0-8 cm thick.
Bf	2 to 27 cm; yellowish red (5YR 4/6 m); gravelly sandy loam; weak, coarse, subangular blocky; very weak, very fine to fine, granular secondary structure; nonsticky, friable, slightly hard, nonplastic; few fine roots; many very fine random discontinuous pores; gravelly coarse fragments; wavy, clear boundary; 16-30 cm thick.
BC	27 to 38 cm; dark yellowish red (10YR 4/4 m); very gravelly loamy sand; common, medium, distinct, mottles; amorphous; single grain secondary structure; nonsticky, firm, hard, nonplastic; common very fine random discontinuous pores; common, very thin clay films in voids and/or channels only, dark yellowish red (10 YR 4/4); gravelly coarse fragments; wavy, clear boundary; 9-15 cm thick.
BC2	38 to 60 cm; dark reddish brown (5 YR 3.5/4 m); very gravelly sandy loam; amorphous; gravelly coarse fragments; wavy, clear boundary.

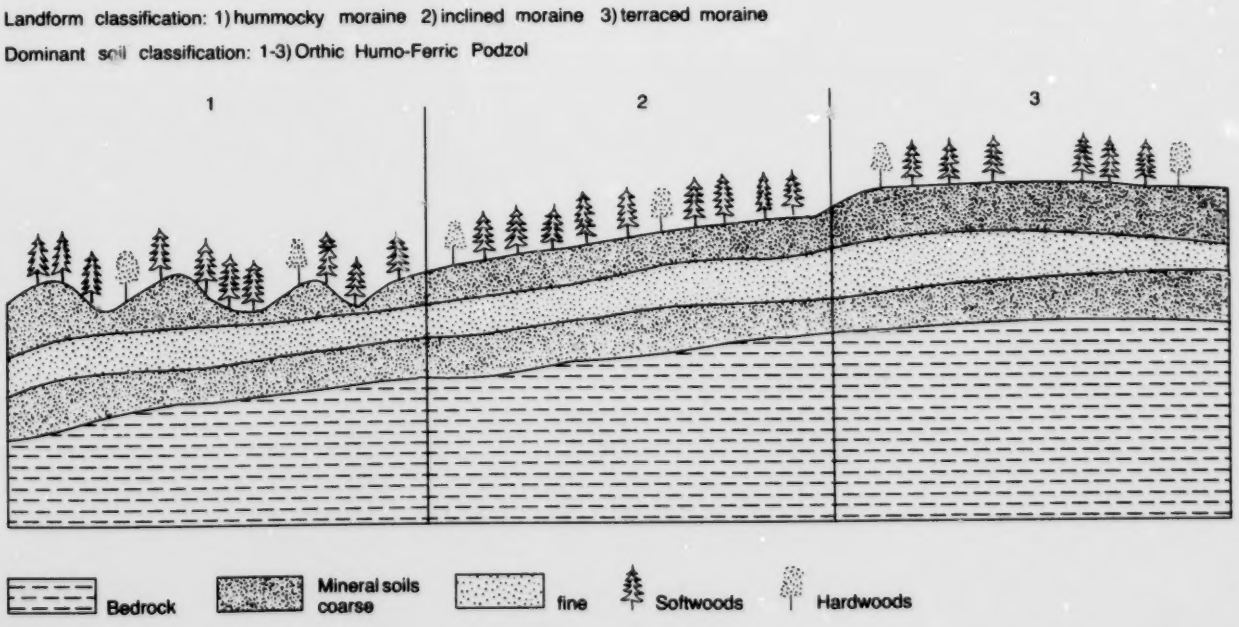


Fig. 19. Sketch of landforms with soils of the Pitt's Pond association.

Pot Hill association

Pot Hill soils are mapped east of Meelpaeg Lake along the east central part of the mapsheet within Mountain pedoclimatic zone.

Section 1 (Fig. 20) represents mostly moderately well drained Orthic Humo-Ferric Podzols on hummocky moraine. They have a slope of 10-15% and they are exceedingly stony and slightly rocky.

Section 2 contains mostly Orthic Humo-Ferric Podzols occurring on morainal veneer over hummocky bedrock. The slope is 10-15% and the drainage is moderate. The soils are excessively stony and very rocky.

The parent material of Pot Hill soils is moderately coarse textured glacial till derived from micaceous schists and gneisses with volcanic rocks and slates.

These soils have little or no agricultural use because of stoniness and rockiness.

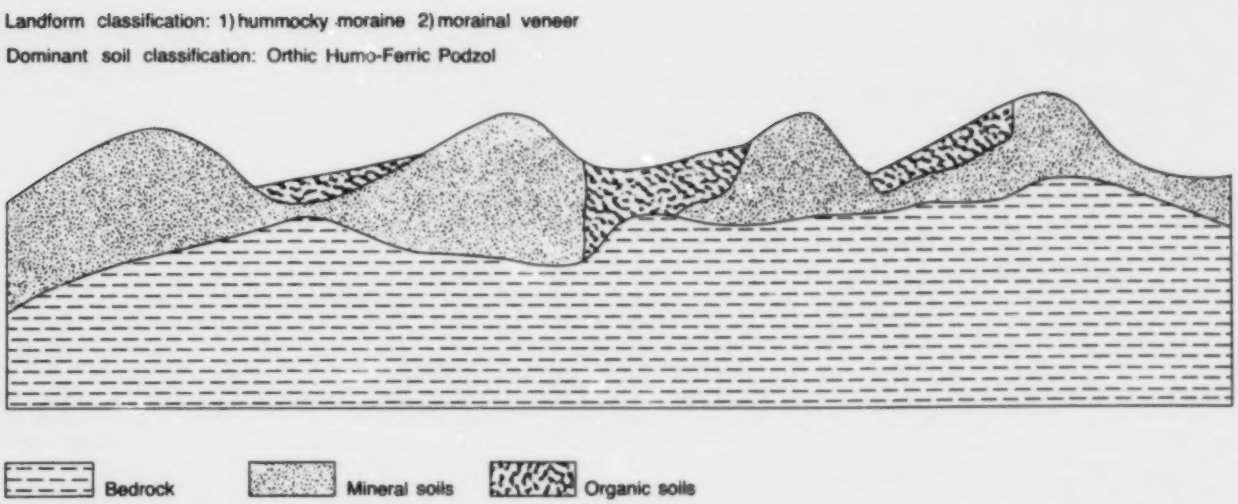


Fig. 20. Sketch of landforms with soils of the Pot Hill association.

Rainy Lake association

Rainy Lake soils occur as dominant in only one area on the mapsheet, north of Red Indian Lake within Mountain pedoclimatic zone. Rainy Lake soils also occur as subdominant with Pot Hill and The Topsails and once with Silver Mountain soils.

The parent material of Rainy Lake soils is moderately decomposed sedge fen peat underlain by moderately coarse textured glacial till or bedrock. They usually occur as sloping fens on a very gentle slope of 0.5-2.5% (Fig. 21). Their drainage is very poor and their classification is Terric Mesisol.

Rainy Lake soils have little or no potential for agricultural development because of peat decomposition and unsuitable climate. They are too shallow to mine as fuel peat.

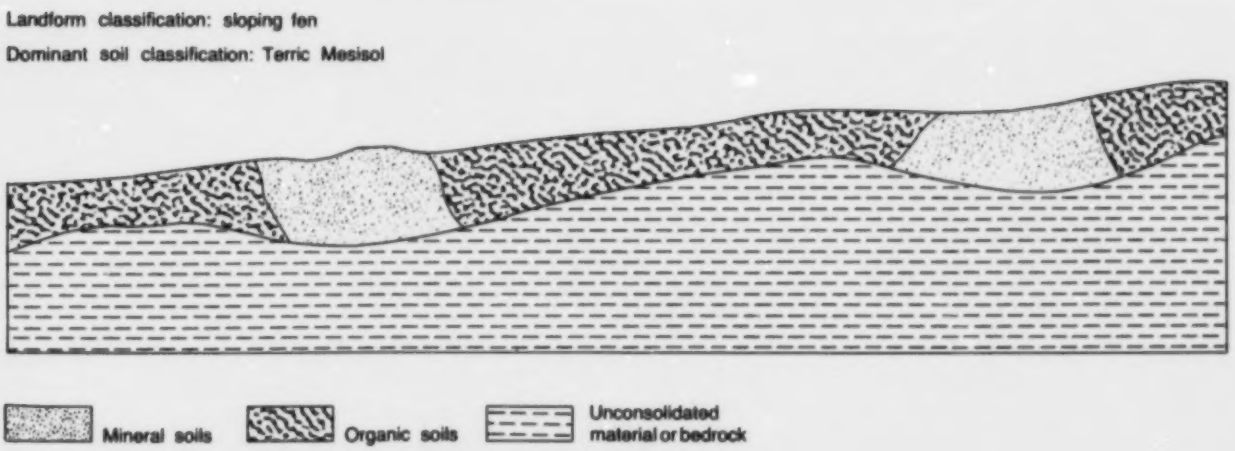


Fig. 21. Sketch of landforms with soils of the Rainy Lake association.

Red Indian association

The Red Indian soils are mapped in the northeast part of the mapsheet, from south of Badger to Victoria Lake along Red Indian Lake. They lie mainly within the Central Newfoundland pedoclimatic zone.

The parent material of these soils is moderately coarse textured, light yellowish brown glacial till derived from dark and light colored volcanic rocks with some slates and sandstones.

Red Indian soils occur in six locations on the mapsheet and these are shown in a schematic drawing in Fig. 22.

Section 1, Figure 22 represents Red Indian soils on hummocky moraine having slopes of 10-15%. They are exceedingly stony and nonrocky. Their drainage is moderate and they are classified as Orthic Humo-Ferric Podzols.

Section 2 contains mainly imperfectly drained Gleyed Humo-Ferric Podzols. They occur on rolling moraine having slopes of 6-9% and they are exceedingly stony and nonrocky.

Section 3 is a morainal veneer over hummocky bedrock with slopes of 10-15%. The soils are exceedingly stony and moderately rocky. Their drainage is moderate and they are classified as Orthic Humo-Ferric Podzols.

Section 4 is a hummocky moraine with slopes of 10-15%. The soils are imperfectly drained and are classified as Gleyed Humo-Ferric Podzols. They are exceedingly stony and moderately rocky.

Section 5 is rolling moraine on slopes of 6-9%. The soils are poorly drained and are classified as Orthic Gleysols. They are exceedingly stony and slightly rocky.

Section 6 is a hummocky moraine on slopes of 16-30%. The soils are exceedingly stony and moderately rocky. They have moderate drainage and are classified as Orthic Humo-Ferric Podzols.

Red Indian soils are mostly rated class 7 for agricultural use mainly because of stoniness problems. Some of them are rated class 5 because of stoniness and excessive water. Some of these could be improved for pasture. Some very small areas of class 4 occur but they are too insignificant to map.

Classification: Gleyed Humo-Ferric Podzol.

Location: Military Grid Ref. 21 UWD 1920 6390; NTS Map Area 12A 7.

Elevation: 358 m (A.M.S.L.)

Vegetation: Pleurozium moss, dogwood, black spruce and balsam fir.

Soil Site: Parent Material 1: coarse loamy till; Undulating Slope: slope of Class 3 (2-5%); Soil drainage; moderately well and imperfectly drained; moderately stony and very stony; Present land use: productive woodland.

Interpretations:	CLI Agriculture: 4/PW.
LF	5 to 0 cm; slightly decomposed needles, leaves and mosses; plentiful, medium roots; wavy, clear boundary.
AE	0 to 4 cm; dark reddish gray; loam; amorphous; plentiful medium roots; wavy, clear boundary.
Bfgh	4 to 14 cm; strong brown; sandy loam; few, faint mottles; weak, subangular blocky; plentiful, medium roots; wavy, clear boundary.
Bcgj	14 to 49 cm; brown, sandy loam; weak, subangular blocky; few, fine roots; wavy, gradual boundary.
C	49 cm +; brown; sandy loam; single grain; few, fine roots.

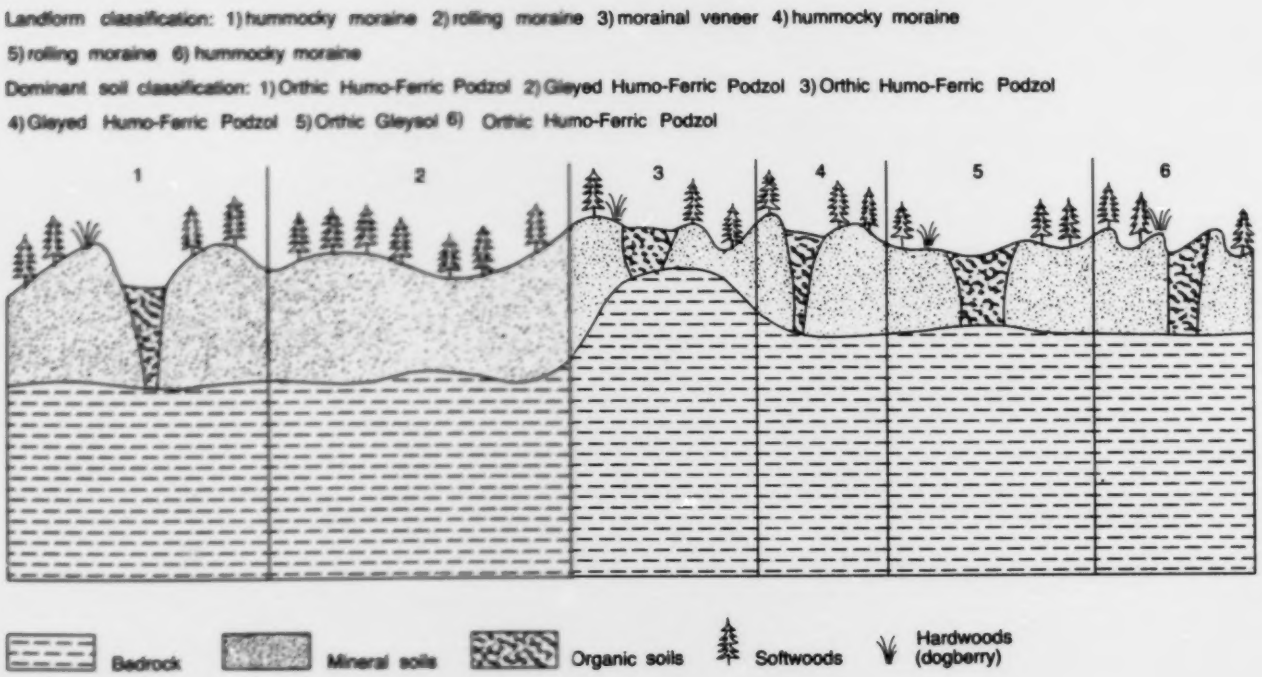

Landform classification: 1) hummocky moraine 2) rolling moraine 3) morainal veneer 4) hummocky moraine
5) rolling moraine 6) hummocky moraine
Dominant soil classification: 1) Orthic Humo-Ferric Podzol 2) Gleyed Humo-Ferric Podzol 3) Orthic Humo-Ferric Podzol
4) Gleyed Humo-Ferric Podzol 5) Orthic Gleysol 6) Orthic Humo-Ferric Podzol
1
2
3
4
5
6
Bedrock
Mineral soils
Organic soils
Softwoods
Hardwoods (dogberry)

Fig. 22. Sketch of landforms with soils of the Red Indian association.

Salmon River association

Salmon River soils are mapped in one very small area in the southeast part of the mapsheet as part of the Jubilee Lake pedoclimatic zone. They occur as morainal blanket over rolling bedrock with a slope of 16-30%. (Fig. 23). They are exceedingly stony and moderately rocky. They are moderately well drained and are classified as Orthic Humo-Ferric Podzols.

The parent material of these soils is medium textured glacial till derived mainly from granite and granodiorite.

These soils have no potential for agriculture and have been rated class 7 because of stoniness, steep topography and frequent occurrence of bedrock exposure.

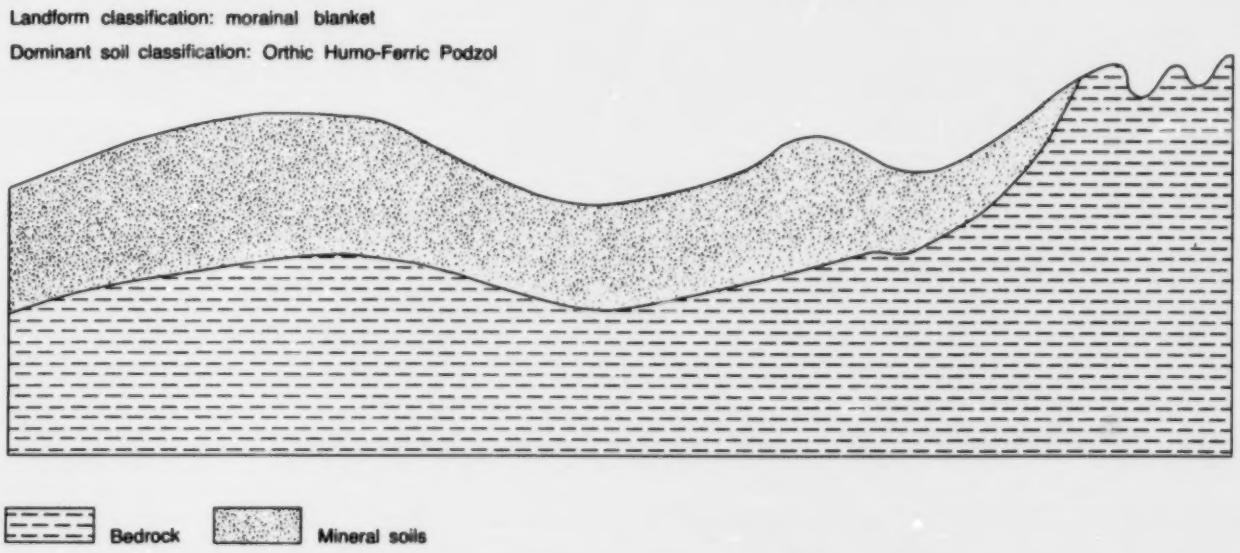


Fig. 23. Sketch of a landform with soils of the Salmon River association.

Silver Mountain association

Silver Mountain soils are mapped in the south central part of the mapsheet from east to west. They are included in the *Mountain pedoclimatic zone.*

The parent material of these soils is moderately, coarse textured glacial till derived from granite, granitic gneiss and schist.

Figure 24 is a sketch of landforms which contain mostly soils of the Silver Mountain association.

Section 1 contains mainly shallow Gleyed Humo-Ferric Podzols. They occur as a morainal veneer over hummocky bedrock with slopes ranging from 16-30%. The soils are excessively stony and very rocky.

Section 2 consists mainly of imperfectly drained Gleyed Humo-Ferric Podzols. They occur as hummocky moraine with slopes of 10-15%. They are excessively stony and moderately rocky.

Section 3 contains mainly Ortstein Humo-Ferric Podzols. They occur as morainal veneer over hummocky bedrock with slopes of 16-30%. They are excessively stony and moderately rocky.

Section 4 contains mainly Orthic Humo-Ferric Podzols occurring as hummocky moraine on a slope of 31-45%. They are exceedingly stony and very rocky.

Section 5 is a morainal veneer over hummocky bedrock. The slopes range from 16-30%. The soils are classified as Gleyed Humo-Ferric Podzols. They are exceedingly stony and moderately rocky.

Approximately half of Section 6 represents Gleyed Humo-Ferric Podzols on morainal veneer over hummocky bedrock with slopes ranging from 10-15%. The soils are exceedingly stony and moderately rocky.

Section 7 contains mainly Ortstein Humo-Ferric Podzols with some Orthic Humic Podzols on morainal veneer over hummocky bedrock with slopes ranging from 16-30%. The soils are excessively stony and very rocky.

Section 8 contains mainly Gleyed Humo-Ferric Podzols on morainal veneer over hummocky bedrock. The slopes range from 31-45% and the soils are exceedingly stony and moderately rocky.

Silver Mountain soils have no potential for agriculture due mainly to stoniness, rockiness and steep topography.

Classification: Orthic Humic Podzol, lithic phase

Location: Military Grid Ref. 21 UWD 5250 4790; NTS Map Area 12A 8.

Elevation: 270 m (A.M.S.L.).

Vegetation: Labrador tea, rhodora, small patches caribou and sphagnum moss and sedge.

Soil Site:	Parent Material 1: sandy; depth to bedrock is 0.5 m; hummocky; Slope: slope of Class 3 (2-5%); Exceedingly stony; Very rocky; Present land use: barren and bog.
Interpretations:	CLI Agriculture: 7/PR.
LF	15 to 0 cm; slightly decomposed mosses, needles, sedges and leaves; plentiful, fine roots.
Ae	0 to 10 cm; gray; sandy; granular; plentiful, fine roots.
Bgcj	10 to 22 cm; dark reddish brown; sand; prominent mottles; granular; slightly cemented; few, fine roots.
Bfgcj	22 to 37 cm; reddish brown; sand; common, prominent mottles; granular, slightly cemented; few, fine roots.
C	37 cm +; olive brown; sand; granular; very few, very fine roots.

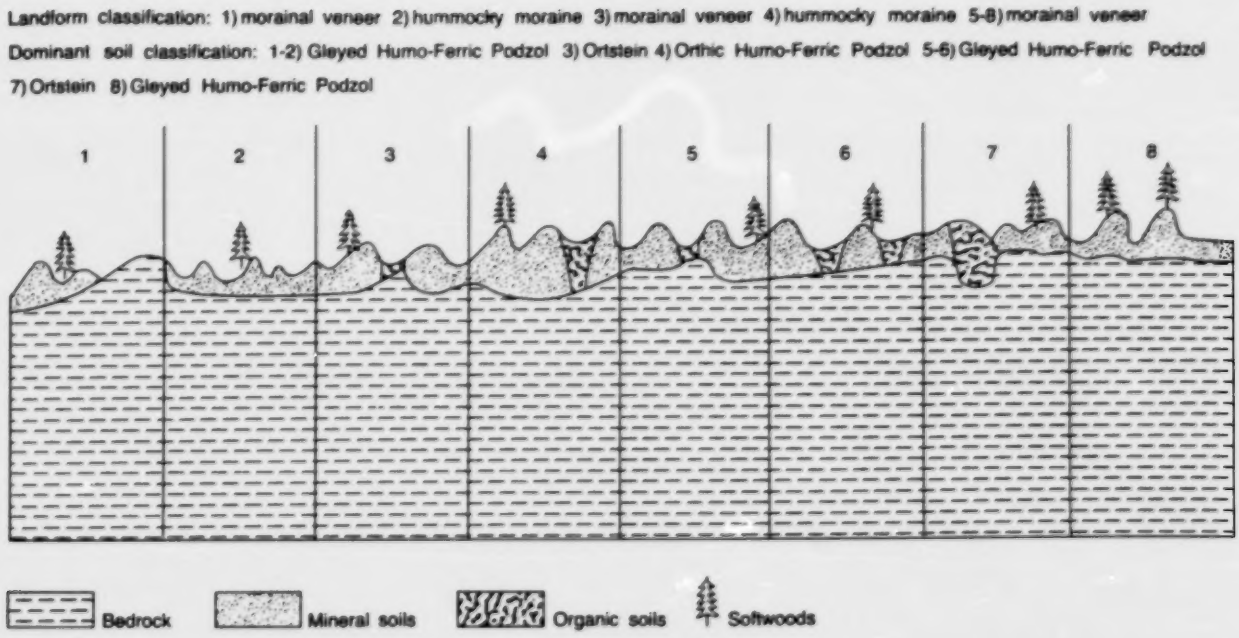


Fig. 24. Sketch of landforms with soils of the Silver Mountain association.

St. George's association

St. George's soils occur in three locations on the west central edge of the mapsheet within Mountain pedoclimatic zone.

Their parent material is moderately coarse textured, olive brown morainal and colluvial material derived from granite and gneiss.

Figure 25 is a schematic drawing of two different landform types that occur on the mapsheet. The dominant soils in these landforms are from the St. George's association.

The landform type in Section 1 appears twice on the mapsheet and contains mostly Orthic Humo-Ferric Podzols on morainal veneer over inclined bedrock. The slope ranges from 31-45%. The soils are exceedingly stony and moderately rocky. They have moderately good drainage.

Section 2 consists mainly of Orthic Humo-Ferric Podzols on morainal veneer over inclined bedrock. The slope ranges mostly from 46-70%. The soils are exceedingly stony and moderately rocky.

St. George's soils have very little or no potential for agriculture mainly because of steep topography, shallowness to bedrock and stoniness. However, some small areas of capability class 4 land do occur.

Classification: Orthic Humo-Ferric Podzol.

Location: Military Grid Ref. 21 UVD 69 803; NTS Map Area 12B 9W.

Vegetation: Forest, softwood, regenerating. Key species listing: balsam fir.

Soil Site: Parent Material 1: coarse loamy and coarse silty till derived from igneous and metamorphic rocks; Morainal, sandy, rolling; Slope: simple slope of Class 3 (2-5%), facing south, site at middle position, slightly mounded microtopography, 100 m long; Soil moisture and drainage: subhumid, moderately well drained, moderately pervious, moderate surface runoff, seepage absent; slightly stony; nonrocky; Present land use: productive woodland.

Interpretations: CLI Agriculture: 4/PF.

L 10 to 7 cm; very dark brown (10YR 2/2 m); material consisting of 20% needles; 10% feathermoss, 20% herbaceous fragments and 50% wood fragments, slight decomposition; plentiful, very fine and fine horizontal roots; very fine pores.

F 7 to 0 cm; very dark brown (10YR 2/2 m); material composed of 20% needles, 10% feathermoss, 20% herbaceous fragments and 50% wood fragments, moderate decomposition; plentiful, very fine and fine horizontal roots; 5-7 cm thick.

Ae	0 to 2 cm; light gray (10YR 6.5/2 m); fine, sandy loam; amorphous; nonsticky, friable; few very fine and fine horizontal roots; common very fine random pores; irregular, abrupt boundary; strongly acidic; 0-4 cm thick.
Bf1	2 to 14 cm; dark reddish gray (5YR 3.5/4 m); sandy loam; amorphous; nonsticky, friable; few very fine and fine horizontal roots; common very fine random pores; irregular, clear boundary; strongly acidic; 8-12 cm thick.
Bf2	14 to 27 cm; dark yellowish brown (10YR 4/4 m); sandy loam; common fine distinct pale brown (10YR 6/3) mottles; amorphous; nonsticky, very friable; very few very fine horizontal roots; common very fine random pores; irregular, clear boundary; strongly acidic; 9-15 cm thick.
BF3	27 to 44 cm; yellowish brown (10YR 5/4 m); coarse sandy loam; many medium prominent strong brown (7.5YR 5/8) mottles; amorphous; nonsticky, slightly sticky, very friable; very few very fine horizontal roots; common very fine random pores; irregular, clear boundary; strongly acidic; 15-20 cm thick.
C	44 cm +; grayish brown (10YR 4.5/2 m); sandy loam; many medium prominent strong brown (7.5YR 5/8) mottles; weak to moderate, fine, platy; nonsticky, very friable; few, random pores; strongly acidic.

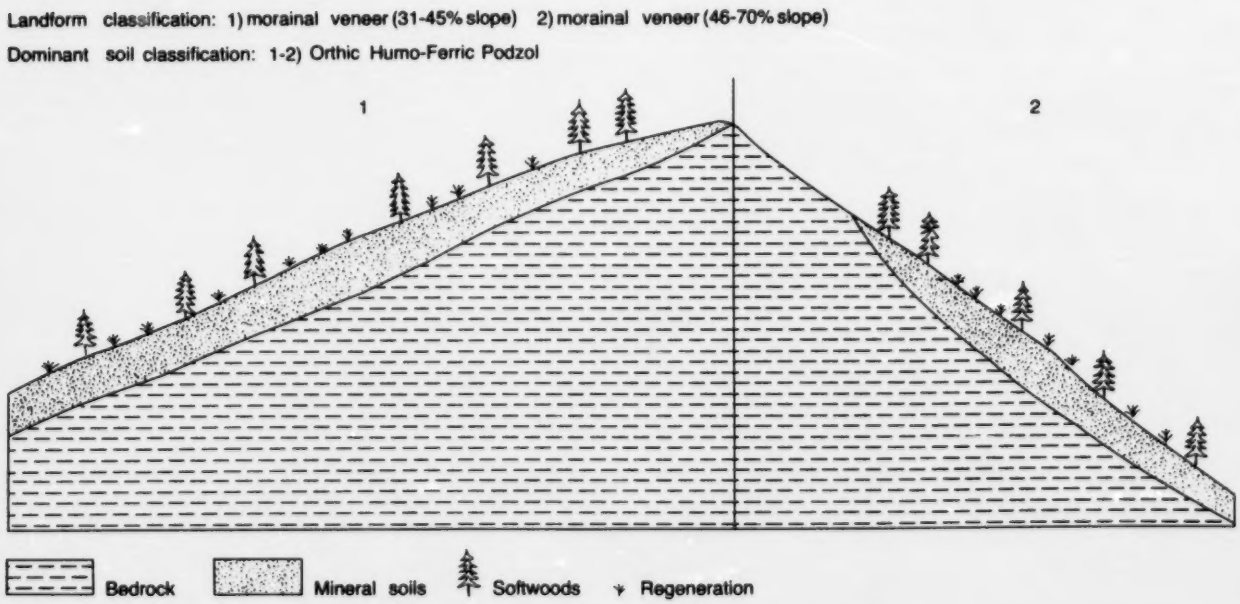


Fig. 25. Sketch of landforms with soils of the St. George's association.

The Topsails association

The Topsails soils are mapped mainly in the north central part of the mapsheet within Mountain pedoclimatic zone.

The parent material of these soils is washed, partially sorted, coarse textured glacial till derived from pale red granite, quartz, monzonite and granodiorite.

Figure 26 is a sketch of landform types that occur on the mapsheet. The Topsails soils are the dominant soils in those landforms.

Section 1 contains mostly Gleyed Ortstein Ferro-Humic Podzols on undulating moraine of slopes 2-5%. Drainage is imperfect and the soils are exceedingly stony and slightly rocky.

Section 2 contains mostly Gleyed Ortstein Ferro-Humic Podzols, which occur on hummocky moraine with slopes of 6-9%. The soils are imperfectly drained and are excessively stony and moderately rocky.

Ortstein Ferro-Humic Podzols occupy most of Section 3. They occur on hummocky moraine with a 6-9% slope. They are moderately well drained and are excessively stony and slightly rocky.

Section 4 contains mainly Gleyed Ortstein Ferro-Humic Podzols on hummocky moraine which has a slope of 6-9%. The soils are imperfectly drained and are excessively stony and slightly rocky.

Section 5 consists mainly of Gleyed Ortstein Ferro-Humic Podzols on morainal veneer over hummocky bedrock with slopes of 10-15%. The soils are imperfectly drained and are excessively stony and moderately rocky.

Section 6 contains mostly Gleyed Ortstein Ferro-Humic Podzols on morainal veneer over hummocky bedrock with slopes of 16-30%. The soils are excessively stony and moderately rocky. Their drainage is mainly imperfect.

Section 7 contains mainly Gleyed Ferro-Humic Podzols on an inclined moraine with a slope ranging from 31-45%. The soils are poorly drained and are excessively stony and very rocky.

Gleyed Humo-Ferric Podzols occur in most of Section 8. The inclined moraine has a slope of 10-15%. The soils are imperfectly drained and are very stony and moderately rocky.

The Topsails Soils have very little or no potential for agriculture due mainly to excessive amounts of stones, their shallowness to bedrock and excessive moisture.

Classification: Ortstein Ferro-Humic Podzol

Location: Military Grid Ref. 21 UVE 8760 980; NTS Map Area 12A 14.

Elevation: 600 m (A.M.S.L.)

Vegetation:	Partridge berry, blueberry, caribou moss and Labrador tea.
Soil Site:	Parent Material 1: sandy till; rolling; Slope: complex slope of Class 5 (10-15%); Soil drainage: well drained; exceedingly stony.
Interpretations:	CLI Agriculture: 7/P.
LF	5 to 0 cm; slightly decomposed leaves and mosses.
Aej	0 to 15 cm; gray; sandy loam; common, fine roots; amorphous; nonsticky.
Bhfc	15 to 30 cm; black; sandy loam; strongly cemented, ortstein; few, very fine roots; abrupt boundary.
Bfc	30 to 40 cm; strong brown; sandy loam; granular, strongly cemented; very few, very fine roots; irregular, clear boundary.

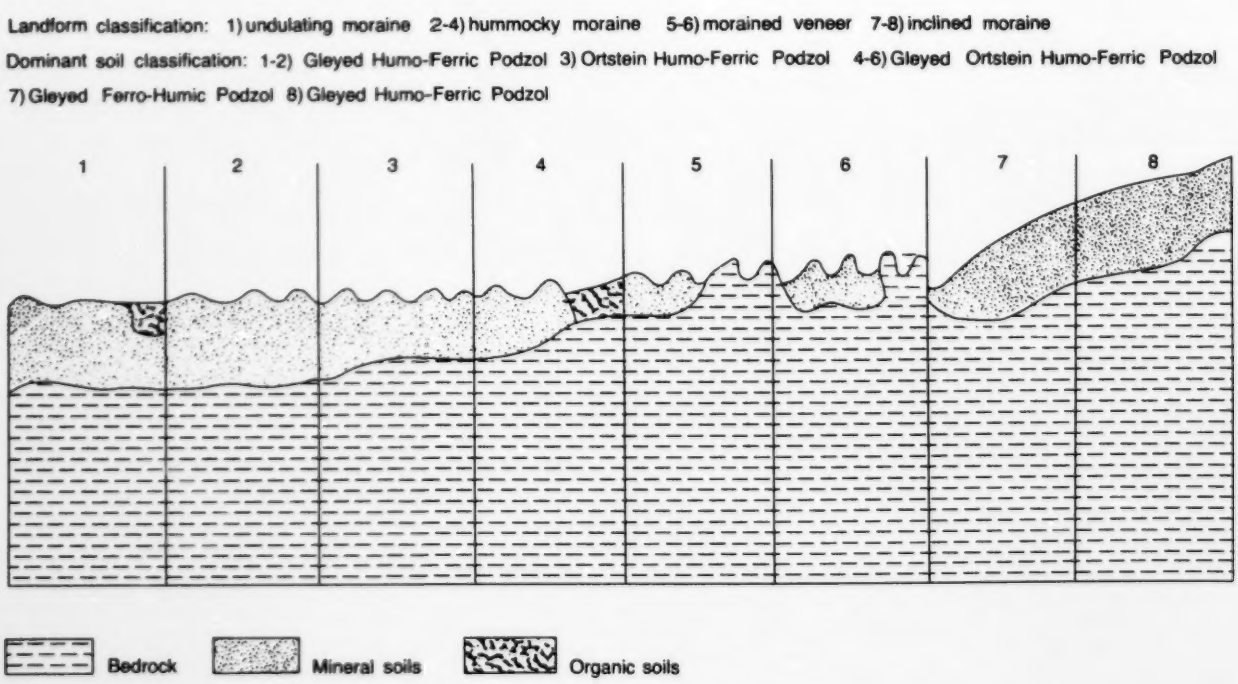


Fig. 26. Sketch of landforms with soils of the Topsails association.

Trout River association

Trout River soils are mapped in one location in the northwest part of the mapsheet within Bay St. George pedoclimatic zone. They developed in moderately coarse to coarse textured glaciomarine deposits.

The soils are classified as Orthic Humo-Ferric Podzols on a terraced glaciomarine deposit (Fig. 27). They are rapidly drained due to their coarse texture. Stones occur on 3-15 percent of the surface while rockiness is not a problem.

Approximately 50 percent of the Trout River soils are rated Class 4 for agriculture with stoniness and moisture deficiency being the main limiting factors.

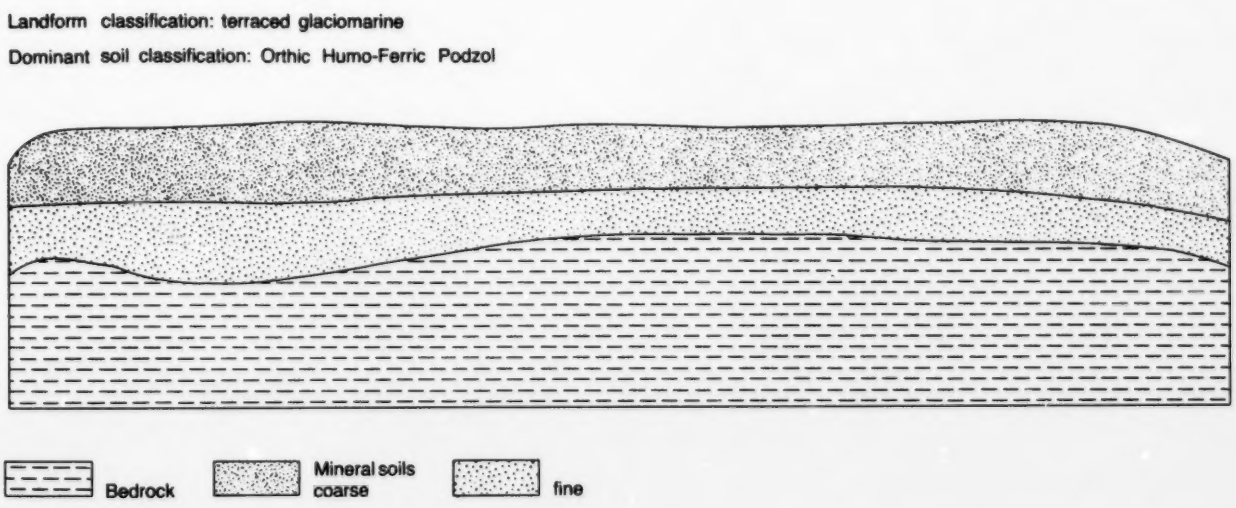


Fig. 27. Sketch of a landform with soils of the Trout River association.

REFERENCES

Canada Land Inventory. Land capability for forestry. Map 12A, Red Indian Lake, Scale 1:250,000.

Canada Land Inventory. Land capability for forestry. Map 11P, Burgeo, Scale 1:250,000.

Canada Soil Survey Committee, Subcommittee on Soil Classification. 1978. The Canadian System of Soil Classification. Canada Department of Agriculture, Publication 1656. Ottawa, Ontario. 164 pp.

Damman, A. W. H. 1964. Some forest types of Central Newfoundland and their relation to environmental factors. Forest Science Monograph 8; 62 pp.

Damman, A. W. H. 1967. The forest vegetation of Western Newfoundland and site degradation associated with vegetation change. Unpubl. Ph.D. Thesis, Univ. of Michigan. 319 p.

Delaney, B. B. 1974. Land Capability Classification for Forestry in Newfoundland. Newfoundland Forest Service, Dept. of Forestry and Agriculture, Canada Land Inventory. 101 p.

Geological Survey of Canada, Dept. of Mines & Technical Surveys. Map 8 1957 Red Indian Lake, Nfld. Sheet 12A (west half). Scale 1:253,440. Map 1196A (east half), Scale 1:250,000. Sheet 11P Map 22-1959 Ramea (west half). Scale 1:253,440.

Hare, F. K. 1952. The climate of the Island of Newfoundland.: A Geographical Analysis. Dept. of Mines and Technical Surveys, Ottawa, Geog. Bull. No. 2, p. 36-88.

Heringa, P. K. 1981. Soils of The Avalon Peninsula, Nfld. Research Branch, Agric. Canada, Land Resource Research Institute, Report No. 3, Nfld. Soil Survey. 117 pp. and map.

Heringa, P. K. Soils of The Bonavista Area, Nfld. Research Branch, Agriculture Canada, Land Resource Research Institute. Unpublished Report, Nfld. Soil Survey.

Rowe, J.S. 1959. Forest Regions of Canada. Can. Dept. of Nor. Aff. and Nat. Res. Forestry Branch. Bulletin 123. 71 pp.

Sudom, M. D.; Van de Hulst, J. W. Soils of The Botwood-Wesleyville Area, Nfld. Dept. of Rural, Agric. & Northern Development, Soil and Land Management Division, Unpublished Report, Nfld. Soil Survey.

Wells, R. E.; Bouzane, T. P.; Roberts, B. A. 1972. Reconnaissance Land Classification of The Corner Brook Area, Nfld. Pilot Project of the National Committee on Forest Land. Nfld. Forest Research Centre. St. John's, Nfld. Information Report N-X-83. 123 pp.

Wells, R. E.; Roberts, B. A. 1973. Bio-Physical Survey of The Badger Diversion Lake Area, Nfld. Operational Project of the National Committee on Forest Land. Nfld. Forest Research Centre, St. John's, Nfld. Information Report N-X-101. 55 pp.

Woodrow, E. F.; Schori, A.; Greenlee, G. M. 1979. Soils of The Codroy Area, Newfoundland. Atlantic Provinces Soil Institute, Land Resource Research Institute, Canada Dept. of Agriculture, Report No. 2. Nfld. Soil Survey, 53 pp. & map.

APPENDIX: Explanation of extended legend

The extended legend as presented in this appendix is used with the accompanying map. The extended legend provides information for each map unit about the dominant soil associations occurring within the map unit, their decile proportions, materials and surface form, gradient, stoniness and rockiness, soil parent materials, pedological soil classification, and where applicable, erosional features.

Whereas the general legend, as presented on the map, refers to the first part of the soil symbol, which provides information about the dominant soil association, the extended legend refers to the total soil symbol used in the map.

Approximate Component Percentage indicates the percentages of the map unit areas occupied by the dominant soil associations. The concept of dominant soil association, and terms used to describe surface form and soil parent materials are explained on the map under the heading "Definitions of Terms used in the General Legend". Dominant Subgroups, as classified according to the C.S.S.C. 1978, are explained in Table 4 of the report. Slope is expressed in terms of percentage - the difference in elevation in metres for each 100 m horizontal. The following slope classes are used.

0 - 0.5%	level	16 - 30%	strong slopes
0.5 - 2.5%	nearly level	31 - 45%	very strong slopes
2 - 5%	very gentle slopes	46 - 70%	extreme slopes
6 - 9%	gentle slopes	71 - 100%	steep slopes
10 - 15%	moderate slopes	100%	very steep slopes

Stoniness is expressed as the percentage of the land surface occupied by fragments coarser than 15 cm in diameter. The following stoniness classes are used:

0.01 - 0.1%	slightly stony, slight to no hindrance to cultivation.
0.1 - 3%	moderately stony, some inteference with cultivation.
3 - 15%	very stony, sufficient stones to constitute a serious handicap to cultivation.
15 - 50%	exceedingly stony, sufficient stones to prevent cultivation until considerable clearing is done.
50%	excessively stony, too stony to permit any cultivation (boulder or stone pavement).

Rockiness is expressed as the percentage of the land surface occupied by exposed berock. The following rockiness classes are used:

2 - 10%	slightly rocky, some interference with tillage but not enough to make intertilled crops impracticable.
10 - 25%	moderately rocky, tillage restricted to hay crops or improved pasture.
25 - 50%	very rocky, sufficient rock outcrop to make all use of machinery impracticable, except for light machinery whereother soil characteristics are specially favourable for improved pasture.
50 - 90%	exceedingly rocky, sufficient rock outcrops to make all use of machinery impracticable.
> 90%	over 90 percent exposed bedrock.

APPENDIX: Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
CENTRAL NEWFOUNDLAND PEDOCLIMATIC ZONE							
Soils Developed on Morainal Material							
M4-1	60-80	Gander	Morainal veneer over hummocky bedrock	2-5 15-50 50-90	Moderatedly coarse textured olive colored glacial till derived from gray and black slate, shale, siltstone and minor granite.	Gleyed Humo-Ferric Podzol, lithic phase	Imperfectly to poorly
	20-40	Mint Pond	Sloping fen	2-5 - -	Dominantly mesic peat derived from sedges and grasses	Terric Mesisol	Very poorly
M4-2	50-70	Gander	Rolling moraine	10-15 15-50 2-10	Moderately coarse textured olive colored glacial till derived from gray and black slate, shale, siltstone and minor granite.	Orthic Humo-Ferric Podzol	Moderately well
	30-50	Deadwolf Pond	Sloping bog	0.5-2.5 0 0	Dominantly fibric peat derived from sphagnum moss.	Typic Fibrisol	Poorly
M4-3	60-80	Gander	Undulating moraine	6-9 3-15 2-10	Moderately coarse textured olive colored glacial till derived from gray and black slate, shale, siltstone and minor granite.	Gleyed Humo-Ferric Podzol	Imperfectly

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
			CENTRAL NEWFOUNDLAND PEDOCLIMATIC ZONE				
	20-40	Deadwolf Pond	Sloping bog	2-5 0 0	Dominantly mesic peat derived from sphagnum moss.	Typic Mesisol	Very poorly
M5-1	80-100	New Bay	Rolling moraine	6-9 15-50 10-25	Coarse to moderately coarse textured, light olive brown glacial till derived from medium grained granite, granodiorite, diorite and other volcanic rocks.	Gleyed Humo-Ferric Podzol	Imperfectly
M5-2	50-70	New Bay	Hummocky moraine	16-30 15-50 0	Coarse to moderately coarse textured, light olive brown glacial till derived from medium grained granite, granodiorite, diorite and other volcanic rocks.	Orthic Humo-Ferric Podzol	Well
	30-50	Mint Pond	Sloping fen	0.5-2.5 0 0	Dominantly mesic peat derived from sedges and grasses.	Typic Mesisol	Very poorly
M13-1	70-90	Red Indian	Hummocky moraine	10-15 15-50 0	Moderately coarse textured, light yellowish brown glacial till derived from dark and light colored volcanic rocks with some slates and sandstones.	Orthic Humo-Ferric Podzol	Moderately well
	15-30	Mint Pond	Horizontal fen	0.5-2.5	Dominantly mesic peat derived from sedges and grasses.	Terric Mesisol	Very poorly

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
CENTRAL NEWFOUNDLAND PEDOCLIMATIC ZONE							
M13-2	80-100	Red Indian	Rolling moraine	6-9 15-50 0	Moderately coarse textured, light yellowish brown glacial till derived from dark and light colored volcanic rocks with some slates and sandstones.	Gleyed Humo-Ferric Podzol	Imperfectly
M13-3	70-90	Red Indian	Morainal veneer over hummocky bedrock	10-15 15-50 10-25	Moderately coarse textured, light yellowish brown glacial till derived from dark and light colored volcanic rocks with some slates and sandstones.	Orthic Humo-Ferric Podzol lithic phase	Moderately well
	15-30	Deadwolf Pond	Domed bog	0.5-2.5 0 0	Dominantly fibric peat derived from sphagnum moss.	Typic Fibrisol	Poorly
M13-4	70-90	Red Indian	Hummocky moraine	10-15 15-50 10-25	Moderately coarse textured, light yellowish brown glacial till derived from dark and light colored volcanic rocks with some slates and sandstones.	Gleyed Humo-Ferric Podzol	Imperfectly
	15-30	Deadwolf Pond	Sloping bog	0.5-2.5 0 0	Dominantly fibric peat derived from sphagnum moss.	Typic Fibrisol	Poorly

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
CENTRAL NEWFOUNDLAND PEDOCLIMATIC ZONE							
M13-5	60-80	Red Indian	Rolling moraine	6-9 15-50 2-10	Moderately coarse textured, light yellowish brown glacial till derived from dark and light colored volcanic rocks with some slates and sandstones.	Orthic Gleysol	Poorly
	20-40	Deadwolf Pond	Sloping Bog	0.5-2.5 0 0	Dominantly mesic peat derived mainly from sphagnum moss.	Typic Mesisol	Very poorly
M13-6	70-90	Red Indian	Hummocky moraine	16-30 15-50 10-25	Moderately coarse textured, light yellowish brown glacial till derived from dark and light colored volcanic rocks with some slates and sandstones.	Orthic Humo-Ferric Podzol	Moderately well
	15-30	Deadwolf Pond	Sloping Bog	2-5 0 0	Dominantly mesic peat derived mainly from sphagnum moss.	Typic Mesisol	Very poorly
M21-1	80-100	Lomond	Morainal veneer over inclined bedrock	16-30 15-50 10-25	Coarse textured, dark grayish brown glacial till derived from granitic gneiss and granite.	Orthic Humo-Ferric Podzol, lithic phase	Moderately well
M24-1	80-100	Birchy Ridge	Rolling moraine	6-9 15-50 0	Coarse textured glacial till derived from gray siltstone, gray shale, sandstone and granite.	Orthic Humo-Ferric Podzol	Well

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
CENTRAL NEWFOUNDLAND PEDOCLIMATIC ZONE							
M24-2	80-100	Birchy Ridge	Morainal veneer over hummocky bedrock	16-30 15-50 25-50	Coarse textured glacial till derived from gray siltstone, gray shale, sandstone and granite.	Orthic Humo-Ferric Podzol, lithic phase	Well
M24-3	80-100	Birchy Ridge	Inclined moraine	16-30 15-50 2-10	Coarse textured glacial till derived from gray siltstone, gray shale, sandstone and granite.	Othic Humo-Ferric Podzol	Well
Soils Developed on Glaciofluvial Material							
F1-1	80-100	Pitt's Pond	Hummocky glaciofluvial materials	2-5 15-50 10-25	Coarse textured, stratified glaciofluvial sands and gravels of mixed origin.	Orthic Humo-Ferric Podzol	Rapidly
F1-2	80-100	Pitt's Pond	Inclined glaciofluvial materials	2-5 0.1-3 0	Coarse textured, stratified glaciofluvial sands and gravels of mixed origin.	Orthic Humo-Ferric Podzol	Well
F1-3		Pitt's Pond	Terraced glaciofluvial materials	2-5 0.1-3 0	Coarse textured, stratified glaciofluvial sands and gravels of mixed origin.	Orthic Humo-Ferric Podzol	Well

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
CENTRAL NEWFOUNDLAND PEDOCLIMATIC ZONE							
Soils Developed on Organic Material							
01-1	80-100	Deadwolf Pond	Domed bog	0.5-2.5 0 0	Dominantly fibric peat derived mainly from sphagnum moss.	Typic Fibrisol	Poorly
02-1	50-70	Mint Pond	Sloping fen	0.5-2.5 0 0	Dominantly mesic peat derived from sedges and grasses.	Terric Mesisol	Very poorly
	30-50	New Bay	Hummocky moraine	6-9 15-50 10-25	Coarse to moderately coarse textured, light olive brown glacial till derived from medium grained granite, granodiorite, diorite and other volcanic rocks.	Orthic Humo-Ferric Podzol	Moderately well
JUBILEE LAKE PEDOCLIMATIC ZONE							
Soils Developed on Morainal Material							
M17-1	70-90	Berry Hill Pond	Morainal blanket over rolling bedrock	10-15 15-50 2-10	Medium to moderately coarse textured light olive brown glacial till derived from slates, siltstone and sandstone with minor volcanic rocks, schist and phyllites.	Orthic Humo-Ferric Podzol	Moderately well

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
			JUBILEE LAKE PEDOCLIMATIC ZONE				
	15-30	Meelpaeg	Sloping bog	2-5 0 0	Moderately decomposed sphagnum peat underlain by moderately coarse textured glacial till or bedrock.	Terric Mesisol	Very poorly
M47-1	60-80	Salmon River	Morainal blanket over rolling bedrock	16-30 15-50 10-25	Medium textured glacial till derived mainly from granite and granodiorite.	Orthic Humo-Ferric Podzol	Moderately well
			MOUNTAIN PEDOCLIMATIC ZONE				
Soils Developed on Morainal Material							
M16-1	60-80	Pot Hill	Hummocky moraine	6-9 15-50 2-10	Moderately coarse textured glacial till derived from micaceous schists and gneisses with volcanic rocks and slates.	Orthic Humo-Ferric Podzol	Moderately well
	20-40	Rainy Lake	Sloping fen	0.5-2.5 0 0	Moderately decomposed peat derived from sedges, underlain by moderately coarse textured glacial till or bedrock.	Terric Mesisol	Very poorly
M16-2	50-70	Pot Hill	Morainal veneer over hummocky bedrock	10-15 > 50 25-50	Moderately coarse textured glacial till derived from micaceous schists and gneisses with volcanic rocks and slates.	Orthic Humo-Ferric Podzol, lithic phase	Moderately well

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
			MOUNTAIN PEDOCLIMATIC ZONE				
	30-50	Rainy Lake	Sloping fen	0.5-2.5 0 0	Moderately decomposed peat derived from sedges, underlain by moderately coarse textured glacial till or bedrock.	Terric Mesisol	Very poorly
M31-1	60-80	The Topsails	Undulating moraine	2-5 15-50 2-10	Washed, partially sorted, coarse textured glacial till derived from pale red granite, quartz, monzonite and granodiorite.	Gleyed Ortstein Ferro-Humic Podzol	Imperfectly
	20-40	Rainy Lake	Horizontal fen	0-0.5 0 0	Moderately decomposed peat derived from sedges, underlain by moderately coarse textured glacial till or bedrock.	Terric Mesisol	Very poorly
M31-2	80-100	The Topsails	Hummocky moraine	6-9 >50 10-25	Washed, partially sorted, coarse textured glacial till derived from pale red granite, quartz, monzonite and granodiorite.	Gleyed Ortstein Ferro-Humic Podzol	Imperfectly
M31-3	80-100	The Topsails	Hummocky moraine	6-9 >50 2-10	Washed, partially sorted, coarse textured glacial till derived from pale red granite, quartz, monzonite and granodiorite.	Ortstein Ferro-Humic Podzol	Moderately well
M31-4	50-70	The Topsails	Hummocky moraine	6-9 >50 2-10	Washed, partially sorted, coarse textured glacial till derived from pale red granite, quartz, monzonite and granodiorite.	Gleyed Ortstein Ferro-Humic Podzol	Imperfectly

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
			MOUNTAIN PEDOCLIMATIC ZONE				
	30-50	Rainy Lake	Sloping fen	0.5-2.5 0 0	Moderately decomposed peat derived from sedges, underlain by moderately coarse textured glacial till or bedrock.	Terric Mesisol	Very poorly
M31-5	50-70	The Topsails	Morainal veneer over hummocky bedrock	10-15 >50 10-25	Washed, partially sorted, coarse textured glacial till derived from pale red granite, quartz, monzonite and granodiorite.	Gleyed Ortstein Ferro-Humic Podzol, lithic phase	Imperfectly
	30-50	Rock Outcrops	Hummocky bedrock	31-45 0 0			
M31-6	60-80	The Topsails	Morainal veneer over hummocky bedrock	16-30 >50 10-25	Washed, partially sorted, coarse textured glacial till derived from pale red granite, quartz, monzonite and granodiorite.	Gleyed Ortstein Ferro-Humic Podzol, lithic phase	Imperfectly
	20-40	Rock Outcrops	Hummocky bedrock	16-30 0 0			
M31-7	80-100	The Topsails	Inclined moraine	31-45 >50 25-50	Washed, partially sorted, coarse textured glacial till derived from pale red granite, quartz, monzonite and granodiorite.	Gleyed Ferro-Humic Podzol	Poorly

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
MOUNTAIN PEDOCLIMATIC ZONE							
M31-8	80-100	The Topsails	Inclined moraine	10-15 3-15 10-25	Washed, partially sorted, coarse textured glacial till derived from pale red granite, quartz, monzonite and granodiorite.	Gleyed Humo-Ferric Podzol	Imperfectly
M34-1	50-70	Silver Mountain	Morainal veneer over hummocky bedrock	16-30 >50 25-50	Moderately coarse textured glacial till derived from granite, granitic gneiss and schist.	Gleyed Humo-Ferric Podzol, lithic phase	Imperfectly
	30-50	Rock Outcrops	Hummocky Bedrock	16-30 0 0			
M34-2	80-100	Silver Mountain	Hummocky moraine	10-15 >50 10-25	Moderately coarse textured glacial till derived from granite, granitic gneiss and schist.	Gleyed Humo-Ferric Podzol	Imperfectly
M34-3	60-80	Silver Mountain	Morainal veneer over hummocky bedrock	16-30 >50 10-25	Moderately coarse textured glacial till derived from granite, granitic gneiss and schist.	Orstein Humo-Ferric Podzol, lithic phase	Moderately well
	20-40	Rainy Lake	Sloping fen	2-5 0 0	Moderately decomposed peat derived from sedges, underlain by moderately coarse textured glacial till or bedrock.	Terric Mesisol	Very poorly

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
MOUNTAIN PEDOCLIMATIC ZONE							
M34-4	60-80	Silver Mountain	Hummocky moraine	31-45 15-50 25-50	Moderately coarse textured glacial till derived from granite, granitic gneiss and schist.	Orthic Humo-Ferric Podzol	Moderately well
	20-40	Ebbegunbaeg	Sloping bog	2-5 0 0	Moderately decomposed peat derived from sphagnum mosses underlain by moderately coarse textured glacial till or bedrock.	Typic Mesisol	Very poorly
M34-5	60-80	Silver Mountain	Morainal veneer over hummocky bedrock	16-30 15-50 10-25	Moderately coarse textured glacial till derived from granite, granitic gneiss and schist.	Gleyed Humo-Ferric Podzol, lithic phase	Imperfectly
	20-40	Ebbegunbaeg	Sloping bog	2-5 0 0	Moderately decomposed peat derived from sphagnum mosses underlain by moderately coarse textured glacial till or bedrock.	Terric Mesisol	Very poorly
M34-6	40-60	Silver Mountain	Morainal veneer over hummocky bedrock	10-15 15-50 10-25	Moderately coarse textured glacial till derived from granite, granitic gneiss and schist.	Gleyed Humo-Ferric Podzol, lithic phase	Imperfectly
	40-60	Ebbegunbaeg	Sloping bog	6-9 0 0	Moderately decomposed peat derived from sphagnum mosses underlain by moderately coarse textured glacial till or bedrock.	Terric Mesisol	Very poorly

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
MOUNTAIN PEDOCLIMATIC ZONE							
M34-7	60-80	Silver Mountain	Morainal veneer over hummocky bedrock	16-30 >50 25-50	Moderately coarse textured glacial till derived from granite, granitic gneiss and schist.	Ortstein Humo-Ferric Podzol, lithic phase	Moderately well
	20-40	Ebbegunbaeg	Sloping bog	2-5 0 0	Moderately decomposed peat derived from sphagnum mosses underlain by moderately coarse textured glacial till or bedrock.	Typic Mesisol	Very poorly
M34-8	80-100	Silver Mountain	Morainal veneer over hummocky bedrock	31-45 15-50 10-25	Moderately coarse textured glacial till derived from granite, granitic gneiss and schist.	Gleyed Humo-Ferric Podzol, lithic phase	Imperfectly
M35-1	80-100	North Lake	Morainal veneer over hummocky bedrock	16-30 0.1-3 25-50	Moderately coarse textured, dark yellowish brown to reddish brown glacial till derived from sandstone, shale and dolomitic limestone.	Gleyed Humo-Ferric Podzol, lithic phase	Imperfectly
M35-2	60-80	North Lake	Morainal veneer over hummocky bedrock	31-45 3-15 10-25	Moderately coarse textured, dark yellowish brown to reddish brown glacial till derived from sandstone, shale and dolomitic limestone.	Orthic Humo-Ferric Podzol, lithic phase	Well
	20-40	Rock Outcrops	Hummocky bedrock	31-45 0 0			

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
			MOUNTAIN PEDOCLIMATIC ZONE				
M35-3	80-100	North Lake	Morainal veneer over hummocky bedrock	31-45 3-15 10-25	Moderately coarse textured, dark yellowish brown to reddish brown glacial till derived from sandstone shale and dolomitic limestone.	Orthic Humo-Ferric Podzol, lithic phase	Well
M35-4	80-100	North Lake	Morainal veneer over ridged bedrock	16-30 0.1-3 0	Moderately coarse textured, dark yellowish brown to reddish brown glacial till derived from sandstone, shale and dolomitic limestone.	Orthic Humo-Ferric Podzol, lithic phase	Moderately well
M37-1	70-90	Atlantic Lake	Morainal veneer over hummocky bedrock	10-15 >50 50-90	Coarse textured glacial till derived predominantly from coarse grained porphyritic granite.	Orthic Humo-Ferric Podzol, lithic phase	Moderately well
	15-30	Ebbegunbaeg	Flat bog	0-0.5 0	Moderately decomposed peat derived from sphagnum mosses, underlain by moderately coarse textured glacial till or bedrock.	Terric Mesisol	Very poorly
M49-1	80-100	St. George's	Morainal veneer over inclined bedrock	31-45 15-50 10-25	Moderately coarse textured, olive brown morainal and colluvial material derived from granite and gneiss.	Orthic Humo-Ferric Podzol, lithic phase	Moderately well

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
MOUNTAIN PEDOCLIMATIC ZONE							
M49-2	70-90	St. George's	Morainal veneer over inclined bedrock	46-70 15-50 10-25	Moderately coarse textured, olive brown morainal and colluvial material derived from granite and gneiss.	Orthic Humo-Ferric Podzol, lithic phase	Moderately well
	15-30	Rock Outcrops	Inclined bedrock	46-70 0 0			
Soils Developed on Organic Material							
04-1	60-80	Rainy Lake	Sloping fen	0.5-2.5 0 0	Moderately decomposed peat derived from sedges, underlain by moderately coarse textured glacial till or bedrock.	Terric Mesisol	Very poorly
	20-40	The Topsails	Undulating moraine	2-5 >50 10-25	Washed, partially sorted, coarse textured glacial till derived from pale red granite, quartz, monzonite and granodiorite.	Orthic Humo-Ferric Podzol	Moderately well
013-1	60-80	Ebbegunbaeg	Sloping bog	2-5 0 0	Moderately decomposed sphagnum peat underlain by moderately coarse textured glacial till or bedrock.	Typic Mesisol	Very poorly

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % / Stoniness % / Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
			MOUNTAIN PEDOCLIMATIC ZONE				
	20-40	Silver Mountain	Hummocky moraine	10-15 15-50 25-50	Moderately coarse textured glacial till derived from granite, granitic gneiss and	Gleyed Humo-Ferric Podzol	Imperfectly
			BAY ST GEORGE PEDOCLIMATIC ZONE				
Soils Developed on Morainal Material							
M28-1	80-100	Cox's Cove	Morainal veneer over hummocky bedrock	16-30 0 10-25	Moderately coarse textured, grayish brown glacial till derived from gray shales, slate, limestone and sandstone.	Orthic Humo-Ferric Podzol, lithic phase	Well
Soils Developed on Glaciofluvial Materials							
W5-1	80-100	Trout River	Terraced glaciomarine deposit (eroded)	2-5 3-15 0	Moderately coarse to coarse textured glaciomarine deposits	Orthic Humo-Ferric Podzol	Rapidly
			ROCKLAND				
R-1	80-100	Rock Outcrops	Ridged bedrock	31-45 0 0			

Extended Legend

Map Unit	Approx. Component %	Dominant Soil Association	LANDFORM: Materials and Surface Form	LANDFORM: Slope % Stoniness % Rockiness %	Soil Parent Material	Dominant Soil Subgroup	Dominant Soil Drainage Class
			ROCKLAND				
R-2	60-80	Rock Outcrops	Hummocky bedrock	31-45 0 0			
	20-40	Silver Mountain	Morainal veneer over hummocky bedrock	31-45 > 50 25-50	Moderately coarse textured glacial till derived from granite, granitic gneiss and schist.	Gleyed Humo-Ferric Podzol, lithic phase	Imperfectly
R-3	70-90	Rock Outcrops	Ridged bedrock	46-70 0 0			
	15-30	Silver Mountain	Morainal veneer over ridged bedrock	46-70 >50 50-90	Moderately coarse textured glacial till derived from granite, granitic gneiss and schist.	Gleyed Humo-Ferric Podzol, lithic phase	Imperfectly
R-4	80-100	Rock Outcrops	Hummocky bedrock	46-80 0 0			
R-5	70-90	Rock Outcrops	Hummocky bedrock	46-80 0 0			
	15-30	Silver Mountain	Morainal veneer over hummocky bedrock	46-80 > 50 50-90	Moderatadly coarse textured glacial till derived from granite, granitic gneiss and schist.	Gleyed Humo-Ferric Podzol, lithic phase	Imperfectly

APPENDIX: Soil Analytical Data

Chemical and Physical Analysis: Berry Hill Pond soil

Horizon	Depth (cm)	pH H2O	Org. C (%)	Total N (%)	Exchangeable Cations NACl (or buffered) Ca (meq/100g)	Mg (meq/100g)	Al (meq/100g)	CEC pH7 (meq/100g)
LF	8-0							
Aeg	0-2							
Bhfg	2-8							
Bfg1	8-13							
Bfg2	12-21	4.4	0.82	0.03	0.1	0.0	0.4	7.1
COgj	21+	5.0	0.14	0.03	1.9	3.9		7.8

Horizon	Sesquioxides Pyrophosphate Fe (%)	Al (%)	Mn (%)	Particle Size Total Sand (%)	Silt (%)	Total Clay (%)	Sieve Analysis Passing No. 10 (% of whole soil)	Atterberg Limit Plastic (%)	Liquid (%)
Bfg2	0.3	0.3	0.0	66.0	30.0	4.0	98	18.6	15.0
COgj	0.1	0.1	0.0	36.0	46.0	18.0	99		

Chemical and Physical Analysis: Cox's Cove soil

Horizon	Depth (cm)	pH		Org. C (%)	Exchangeable Cations NACl (or buffered)			CEC pH7	Analysis of Water Available P (ppm)
		H_2O	$CaCl_2$		Ca	Mg	Al	(meq/100g)	
LF	5-0								
Ae	0-2	3.6	3.0	2.9	2.2	0.9	6.0	18.8	4.0
Bfgj	2-17	3.9	3.4	2.5	2.4	0.8	11.9	27.6	4.0
R	17+								

Horizon	Sesquioxides Oxalate			Particle Size			Sieve Analysis Passing No.
	Fe (%)	Al (%)	Mn (%)	Total Sand (%)	Silt (%)	Total Clay (%)	10 (% of whole soil)
Ae	0.2	0.1		19.0	45.0	36.0	
Bfgj	2.1	1.4		22.0	30.0	48.0	

Chemical and Physical Analysis: Gander soil

Horizon	Depth (cm)	pH $CaCl_2$	Org. C (%)	Total N (%)	Exchangeable Cations NACl (or buffered) Ca (meq/100g)	Mg (meq/100g)	Al (meq/100g)	CEC pH7 (meq/100g)
L	12-9							
F	9-0							
Ae	0-2	3.8	0.67	0.04	0.2	0.3	3.6	5.9
Bf1	2-22	4.4	0.44	0.13	0.2	0.2	0.1	11.5
Bf2	22-50	4.8	1.01	0.07	0.1	0.1	0.1	6.3
C	50+	4.7	0.42	0.03	0.1	0.0	0.0	4.1

Horizon	Sesquioxides Pyrophosphate Fe (%)	Al (%)	Mn (%)	Particle Size Total Sand (%)	Silt (%)	Total Clay (%)	Sieve Analysis Passing No. 10 (% of whole soil)
Ae	0.1	0.1	0.0	51.0	39.0	10.0	
Bf1	0.8	0.9	0.0	50.0	37.0	13.0	
Bf2	0.1	0.5	0.0	46.0	43.0	11.0	
C	0.1	0.3	0.0	50.0	41.0	9.0	

Chemical and Physical Analysis: Lomond soil

Horizon	Depth (cm)	pH $CaCl_2$	Org. C (%)	Total N (%)	Exchangeable Cations NACl (or buffered) Ca (meq/100g)	Mg	Al	CEC pH7 (meq/100g)
LF	5-0							
Ae	0-6							
Bf	6-18	4.2	2.55	0.10	0.1	0.0	0.0	13.9
BC	18-53	4.5	0.57	0.03	0.2	0.0		6.7
C	53+	4.3	0.30	0.02	0.1	0.0	0.6	4.6

Horizon	Sesquioxides Pyrophosphate Fe (%)	Al (%)	Mn (%)	Particle Size Total Sand (%)	Silt (%)	Total Clay (%)	Sieve Analysis Passing No. 10 (% of whole soil)
Bf	0.1	1.0	0.0	82.0	8.0	10.0	
BC	0.1	0.3	0.0	92.0	3.0	5.0	
C	0.1	0.2	0.0	89.0	6.0	5.0	

Chemical and Physical Analysis: New Bay soil

Horizon	Depth (cm)	pH $CaCl_2$	Org. C (%)	Total N (%)	Exchangeable Cations NACl (or buffered) Ca (meq/100g)	Mg (meq/100g)	Al (meq/100g)	CEC pH7 (meq/100g)	Analysis of Water Available P (ppm)
LFH	13-0								
Bf	0-13	4.9	4.5	3.21	12.3	1.0	2.1	35.3	3.6
Bmg	13-29	5.2	4.5	0.97	2.7	0.2	2.1	11.8	0.8
BCg	29-56	5.3	4.6	0.56	1.7	0.1	3.3	9.0	1.0
Cg	56+	5.4	4.6	0.47	2.8	0.6	2.1	8.1	0.6

Horizon	Sesquioxides Oxalate Fe (%)	Al (%)	Mn (%)	Particle Size Total Sand (%)	Silt (%)	Total Clay (%)	Sieve Analysis Passing No. 10 (% of whole soil)
Bf	1.6	0.2		40.0	36.0	24.0	48
Bmg	0.3	0.4		59.0	29.0	12.0	58
BCg	0.2	0.2		61.0	31.0	8.0	68
Cg	0.1	0.2		59.0	34.0	7.0	40

Chemical and Physical Analysis: North Lake soil

Horizon	Depth (cm)	pH H2O	Org. C (%)	Total N (%)	Exchangeable Cations NACl (or buffered) Ca (meq/100g)	Mg	Al	CEC pH7 (meq/100g)
LF	3-0							
Ae	0-4							
Bfg	4-19	5.0	2.35	0.10	2.3	0.9		11.7
BC	19-44	6.7	3.48	0.05	4.0	1.4		8.0
C	44+	6.7	2.93	0.04	3.1	1.1		6.4

Horizon	Sesquioxides Pyrophosphate Fe (%)	Al (%)	Mn (%)	Particle Size Total Sand (%)	Silt (%)	Total Clay (%)	Sieve Analysis Passing No. 10 (% of whole soil)
Bfg	0.3	0.6	0.0	50	40	10	98
BC	0.1	0.1	0.0	55	37	8	93
C	0.1	0.1	0.0	50	40	10	94

Chemical and Physical Analysis: Pitt's Pond soil

Horizon	Depth (cm)	pH $CaCl_2$	Org. C (%)	Total N (%)	Exchangeable Cations NACl (or buffered) Ca (meq/100g)	Mg	Al	CEC pH7 (meq/100g)	Analysis of Water Available P (ppm)
LF	10-0								
Ae	0-2	3.8	3.2	1.73	0.4	0.2	6.6	10.8	1.6
Bf	2-27	5.0	4.5	2.81	0.9	0.2	2.2	41.9	1.6
BC1	27-38	5.4	5.1	0.41	0.5	0.1	-	10.9	2.0
BC2	38-60	5.4	4.9	2.54	0.5	0.3	-	26.8	3.0

Horizon	Sesquioxides Oxalate Fe (%)	Al (%)	Mn (%)	Particle Size Total Sand (%)	Silt (%)	Total Clay (%)	Sieve Analysis Passing No. 10 (% of whole soil)
Ae	0.1	0.1		45.0	42.0	13.0	77
Bf	0.6	1.3		60.0	26.0	14.0	52
BC1	0.1	0.3		79.0	17.0	4.0	33
BC2	0.2	0.6		72.0	23.0	5.0	3

Chemical and Physical Analysis: Red Indian soil

Horizon	Depth (cm)	pH $CaCl_2$	Org. C (%)	Total N (%)	Exchangeable Cations NACl (or buffered) Ca (meq/100g)	Mg	Al	CEC pH7 (meq/100g)
LF	5-0							
Ae	0-4							
Bfgj	4-14	4.4	2.59	0.12	0.2	0.1	0.7	12.8
BOgj	14-49	4.9	1.08	0.10	0.2	0.0	-	6.9
C	49+	4.6	0.46	0.03	0.1	0.0	-	3.2

Horizon	Sesquioxides Pyrophosphate Fe (%)	Al (%)	Mn (%)	Particle Size Total Sand (%)	Silt (%)	Total Clay (%)	Sieve Analysis Passing No. 10 (% of whole soil)
Bfgj	0.2	0.7	0.0	61.0	31.0	8.0	93
BOgj	0.1	0.3	0.0	63.0	31.0	6.0	92
C	0.0	0.1	0.0	67.0	28.0	5.0	91

Chemical and Physical Analysis: Silver Mountain soil

Horizon	Depth (cm)	pH $CaCl_2$	Org. C (%)	Total N (%)	Exchangeable Cations NACl (or buffered) Ca (meq/100g)	Mg	Al	CEC pH7 (meq/100g)
LF	15-0							
Ae	0-10							
Bgcj	10-22	4.0	3.35	0.09	0.2	0.0	3.1	27.9
Bfgcj	22-37	4.2	1.28	0.04	0.2	0.0	1.1	12.8
C	37+	4.3	1.09	0.03	0.1	0.0	0.4	8.8

Horizon	Sesquioxides Pyrophosphate Fe (%)	Al (%)	Mn (%)	Particle Size Total Sand (%)	Silt (%)	Total Clay (%)	Sieve Analysis Passing No. 10 (% of whole soil)
Bgcj	0.1	0.8	0.0	88.0	8.0	4.0	96
Bfgcj	0.1	0.4	0.0	92.0	5.0	3.0	99
C	0.0	0.5	0.0	88.0	9.0	3.0	97

Chemical and Physical Analysis: St. George's soil

Horizon	Depth (cm)	pH CaC_2	Org. C (%)	Total N (%)	Exchangeable Cations NACl (or buffered) Ca (meq/100g)	Mg	Al	CEC pH7 (meq/100g)	Analysis of Water Available P (ppm)
L	10-7								
F	7-0								
Ae	0-2	4.0	3.5	0.83	0.3	0.2	1.8	4.7	-
Bf1	2-14	4.5	4.3	4.28	0.4	0.1	1.7	13.3	-
Bf2	14-27	4.6	4.4	3.26	0.3	0.1	1.3	10.4	0.4
Bf3	27-44	5.1	4.4	1.43	0.1	-	0.1	6.0	0.3
C	44+	5.2	4.5	0.63	0.1	-	0.1	3.3	1.5

Horizon	Sesquioxides Oxalate Fe (%)	Al (%)	Mn (%)	Particle Size Total Sand (%)	Silt (%)	Total Clay (%)	Sieve Analysis Passing No. 10 (% of whole soil)
Ae	0.1	-		60.0	35.0	5.0	95
Bf1	1.0	1.2		61.0	33.0	6.0	86
Bf2	0.6	0.9		65.0	30.0	5.0	86
Bf3	0.2	0.4		67.0	27.0	6.0	82
C	-	0.2		58.0	38.0	4.0	88

Chemical and Physical Analysis: The Topsails soil

Horizon	Depth (cm)	pH $CaCl_2$	Org. C (%)	Total N (%)	Exchangeable Cations NACl (or buffered) Ca (meq/100g)	Mg	Al	CEC pH7 (meq/100g)
L	5-0							
Aej	0-15	3.4	1.29	0.09	0.2	0.1	1.8	8.4
Bhfc	15-30	4.1	7.07	0.20	0.2	0.0	2.5	37.3
Bfc	30-40	4.4	2.01	0.05	0.1	0.0	0.5	13.3
BCc	40+							

Horizon	Sesquioxides Pyrophosphate Fe (%)	Al (%)	Mn (%)	Particle Size Total Sand (%)	Silt (%)	Total Clay (%)	Sieve Analysis Passing No. 10 (% of whole soil)
Aej	0.0	0.1	0.0	63.0	31.0	6.0	95
Bhfc	0.6	2.0	0.0	70.0	24.0	6.0	98
Bfc	0.2	0.6	0.0	65.0	31.0	4.0	97

MAPS
NOT
FILMED

CARTES
OMISES